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BIENNIAL REPORT

1908-1910

PUBLISHED BY
THE CONNECTICUT AGRICULTURAL COLLEGE
STORRS, CONNECTICUT

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State of Connecticut

PUBLIC DOCUMENT No. 29

BIENNIAL REPORT OF THE TRUSTEES

OF THE

CONNECTICUT AGRICULTURAL COLLEGE

AT

STORRS, CONN.

For the two fiscal years ended September 30, 1910, and for the two years in other matters ended November 30, 1910

PRINTED BY ORDER OF THE LEGISLATURE

HARTFORD
PUBLISHED BY THE STATE
1911

PUBLICATION
APPROVED BY
THE BOARD OF CONTROL

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The Connecticut Agricultural College

BOARD OF TRUSTEES

The Governor of Connecticut ..... Ex-officio

FRANK B. WEEKS, LL.D., Middletown

Director of the Connecticut Experiment Station ..... Ex-officio

EDWARD H. JENKINS, Ph.D., New Haven

Appointed by the Senate	Term Expires
E. STEVENS HENRY, Rockville	1911
GEORGE A. HOPSON, Wallingford	1911
LEWELLYN J. STORRS, Mansfield Center	1911
CHARLES A. CAPEN, Willimantic	1913
CHARLES M. JARVIS, Berlin	1913
JOSEPH W. ALSOP, Avon	1913

Elected by the Alumni

ARTHUR J. PIERPONT, Waterbury	1911
HARRY G. MANCHESTER, Winsted	1913

Elected by the Board of Agriculture

D. WALTER PATTEN, North Haven	1911

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Auditor of Accounts

L. J. STORRS

To His Excellency, FRANK B. WEEKS,
Governor of the State of Connecticut:

I have the honor to submit herewith the Report of the Board of Trustees of The Connecticut Agricultural College for the two fiscal years ended September 30th, 1910, and for the two years in other matters ended November 30, 1910.

Very respectfully,
C. A. CAPEN,
Secretary of the Board of Trustees

Report of the President

To the Trustees of the Connecticut Agricultural College:—

I have the honor to present to you for transmission to the Governor of Connecticut a report of the Agricultural College for the two years ended November 30, 1910.

LEGISLATIVE APPROPRIATIONS, 1909-11

The legislature of 1909 made appropriations for the two fiscal years October 1st, 1909, to September 30, 1911, as follows:—

For current expenses	$50,000.00
Valentine farm	8,500.00
Steel tower and tank	4,101.56
For the erection of four cottages	18,000.00
For the erection of a temporary dining hall	12,500.00
For improvement of highway, college to Eagleville	10,000.00
For furnishing Horticultural Hall	5,000.00
Total for two years	$108,101.56

CURRENT EXPENSES—The appropriation for current expenses has been used for the payment of employees not engaged in instruction, for repairs to buildings, coal, freight, care of grounds, and for general maintenance and administrative purposes.

VALENTINE FARM—The appropriation of $8,500 for the purchase of the Valentine farm was made available immediately upon the passage of the bill. The deed was passed and the farm came into the possession of the State June 15, 1909.

STEEL TOWER AND TANK—The appropriation of $4,101.56 was made to reimburse the treasurer of the college for an expenditure previously incurred. The above amount was drawn from the comptroller and converted into current funds.

COTTAGES—The appropriation of $18,000 for cottages has been used, and four nine-room dwellings have been erected and are now occupied by families of members of the faculty. Mr. C. H. Preston of Norwich was the architect, and Blackledge & Co. of Norwich the builders. The cottages themselves were completed within the appropriation, but the cost of the building lots, expense of grading, water and sewage, were paid for from current funds. The new cottages

have made it possible to locate elsewhere members of the faculty formerly quartered in Gold Hall, thus providing rooms for twenty additional students. The income of the college is increased by $1200, the annual rental of these dwellings, which is at the rate of about 6 per cent. on the total investment.

DINING HALL—The trustees asked the last legislature for an appropriation of $30,000 for the erection of a students' dining hall. This amount was not allowed, but the sum of $12,500 was appropriated for the erection of a temporary building for the purpose named. After due consideration it was decided that the building to be erected as a temporary dining hall should be planned for the future use of the mechanic arts department. Numerous plans for buildings were submitted, and Mr. Charles S. Palmer of Meriden was selected as architect. Plans and revised plans were submitted to contractors, but it was found impossible to erect a suitable building within the stated appropriation. By careful planning and studied economies it has been found possible to provide for the extra cost out of current college funds. The contract was finally let to Mr. Edgar Rhodes of Merrow, Conn., for $17,309.39, this amount not including the cost of grading, sewage, water connections, and architect's fees. The building is now under way and will be completed about February 1, 1911. The sum of $5,000 will be needed for equipment.

EAGLEVILLE ROAD—"The Board of Trustees of the Connecticut Agricultural College is hereby authorized and empowered to enter into proper contracts for the improvement of the highway commencing at said college, thence running to the railroad station at Eagleville, subject to the provisions of section two of this resolution. The cost of said improvement shall not exceed the sum of ten thousand dollars, and the sum of ten thousand dollars is hereby appropriated to be paid out of any money in the treasury not otherwise appropriated, for the purpose of paying the cost of said improvement.

"The plans and specifications for said improved highway shall be prepared by the state highway commissioner, who shall thereupon, in the name of said board of trustees, advertise for bids therefor and award the contract to the lowest responsible bidder. Upon the completion of said work to the satisfaction of the state highway commissioner, he shall certify the fact of such completion to the state comptroller and the board of trustees, and the board of trustees shall thereupon draw its order upon the state treasurer for the amount of said contract.

"Upon the completion of the work and acceptance of said highway by the state highway commissioner, the selectmen of the town of Mansfield shall maintain said highway in good repair to the satisfaction of said highway commissioner."

Approved August 13th, 1909.

A survey was made, plans and specifications were drawn, and bids received for the construction of this road, all of which were in excess of the appropriation. It was finally decided to begin at the college end and complete the road as far as the money appropriated would allow. Accordingly a contract has been entered into for the construction of about two miles of the roadbed. The layout is to be changed in several places from the existing highway, the town of Mansfield providing the funds for the purpose of securing right of way.

OTHER LEGISLATION

Public Acts 1909, ch. 172 Concerning the Printing of the Catalogue Number

"Four thousand copies of the catalogue number of the Connecticut Agricultural College bulletin, or such number not exceeding four thousand as the board of control shall determine, shall be printed annually and distributed according to law."

Public Acts 1909, ch. 256 Establishing the office of State Ornithologist

"The board of trustees of the Connecticut Agricultural College shall appoint a member of the faculty of the Connecticut Agricultural College as a State ornithologist, who shall hold office during the pleasure of the board and shall serve without compensation.

"It shall be the duty of the State ornithologist to investigate the food supply of the birds of this State and to determine, so far as possible, the effect of birds upon insects or other sources of injury to fruits and vegetation, to experiment with a view to discovering the best methods of protection of fruits and crops from birds, insects, or other sources of destruction thereof, to act in an advisory capacity as to legislation concerning such matters, and to issue such reports and bulletins as the exigencies of his work may require or he may think expedient."

In accordance with this act the board of trustees have appointed Mr. Herbert K. Job as lecturer in ornithology and State ornithologist. Mr. Job has made arrangements with Mr. George D. Tilley of Darien to make use of his splendid aviary and hatchery as a state ornithological experiment station. This plant, together with Mr. Tilley's staff of employees, furnishes exceptional facilities for the propagation of game birds in large numbers, and for investigation and experimentation along economic lines. It is to be hoped that the present legislature will provide a salary for the state ornithologist sufficient to retain the services of Mr. Job. Attention is invited to his report on later pages.

NEEDS OF THE COLLEGE

As originally planned, the dormitories, classrooms, and laboratories were sufficient for the accommodation of about one hundred students. The largely increased enrolment now necessitates larger quarters, and the increasing interest in agriculture, and the enlarged demands made upon the institution, call for a more extended equipment. It is

the opinion of the trustees, however, that when one additional dormitory has been erected, the further growth of the college as to numbers should not be encouraged until after a more complete equipment for instruction shall have been provided.

From a list of the present needs of the college the trustees have selected those which are most urgent. Buildings which will be needed in the near future are: a library, a gymnasium and armory, a home economics building, a science hall, a veterinary laboratory, an auditorium and assembly hall, and an administration building.

Requests for Appropriations to be Made to the Legislature of 1911

1.	Current Expenses	$50,000.00
2.	In lieu of interest on Agricultural College Fund	13,500.00
3.	Poultry School Building	25,000.00
4.	Dormitory for Young Men	75,000.00
5.	Agricultural Extension	5,000.00
6.	Addition to Dairy Building to accommodate bacteriology, agronomy, classroom, offices, and stock judging	20,000.00
7.	Addition to Dairy Barn	10,000.00
8.	Electric Lights	6,000.00
9.	Fire Proof Addition to Horse Barn	10,000.00
10.	Students' Infirmary	5,000.00
11.	Experiment Station	9,000.00
12.	Furnishing Dining Hall	5,000.00
13.	Farm Machinery Building	15,000.00
		$248,500.00

CURRENT EXPENSES—This appropriation from the State will be needed for the payment of salaries of employees not engaged in instruction, for repairs to buildings, coal, freight, care of grounds, and for general maintenance and administrative expenses. With the growth of the institution this fund of necessity will have to be increased in order to make available the federal fund which can be used for salaries of instructors and equipment for instruction only.

As illustrating the funds appropriated by the several states to supplement the gifts of the federal government, attention is called to the first four columns of figures in Table I.

TABLE 1

Statistics Relating to Land Grant Colleges

Amounts given by the States to Land Grant Colleges (for current expenses) for every dollar given by the U. S. Government.					Amounts given by the States for buildings.	Total value of the property of the institutions
State	1906	1907	1908	1909	1905 to 1909 inclusive	
Connecticut	$ .80	$ .80	$ .83	$ .77	$ 139,103	$ 566,000
Rhode Island	.60	1.00	.83	.71	89,797	357,811
Vermont	.34	.34	.29	.24	60,000	2,065,711
New Hampshire	.52	.52	.43	.37	97,088	606,200
Maine	1.28	1.60	2.17	2.36	142,000	915,300
Massachusetts	2.61	2.79	1.00	2.68	183,494	990,345
Indiana	6.15	6.22	5.38	6.06	159,224	1,625,000
California	15.51	17.38	15.61	12.86	779,197	9,356,353
Iowa	6.24	6.39	6.03	7.45	759,279	2,979,647
Kansas	3.60	4.00	4.67	4.43	329,890	1,826,589
New York	3.00	5.00	6.00	5.14	101,049	15,095,214
Missouri	10.18	12.13	14.26	12.08	316,466	3,406,489
Wisconsin	22.92	24.88	22.92	21.44	1,037,503	5,341,488
Minnesota	11.41	11.86	14.07	11.72	2,049,707	6,590,131
Ohio	12.94	14.35	11.94	11.32	628,243	4,637,962
Nebraska	7.90	8.10		11.19	654,355	2,688,120
Illinois	14.00	14.00	15.00	12.86	2,126,825	3,546,241
Washington	3.00	4.34	7.23	3.10	741,000	5,052,428
Texas	3.90	3.89	3.28	2.82	215,450	1,311,788
Average of 65 institutions in 48 states and territories	3.69	4.03	3.69	3.79	296,300	2,355,812

Connecticut appropriated for current expenses in 1896, 80 cents for each dollar given by the national government, 80 cents for each dollar in 1907, 83 cents for each dollar in 1908, and 77 cents for each dollar in 1909.

Wisconsin appropriated $22.92 for each dollar given by the federal government in 1906, $24.88 in 1907, $22.92 in 1908, and $21.44 in 1909.

On the average the forty-eight states and territories appropriated to sixty-five institutions $3.69 for each dollar given by the federal government in 1906, $4.03 for each dollar given in 1907, $3.69 for each dollar given in 1908, and $3.79 for each dollar given in 1909, or about five times the amount appropriated to the Connecticut Agricultural College.

IN LIEU OF INTEREST ON AGRICULTURAL COLLEGE FUND—The agricultural college fund is an endowment of the federal government by virtue of a grant to the State under an act of Congress

approved July 2, 1862. "The treasurer of the State shall pay quarterly to the Connecticut Agricultural College interest at the rate of 5% per annum on the original principal of said fund, out on any money in the treasury not otherwise appropriated."

STUDENTS' INFIRMARY—The college buildings are situated on high ground with good natural drainage. The water supply is pure, and the sewage system is modern and adequate. While the actual sanitary conditions are excellent, yet when so many congregate various diseases may be brought by students themselves. Last year a case of spotted fever developed at the college shortly after the opening of the fall term, which terminated fatally. A case of diphtheria developed after the return of the students from the Thanksgiving recess. In both instances there was considerable nervousness among the students, resulting in the temporary withdrawal of a large number. A small students' infirmary well equipped with hospital furnishings and medicines should be provided for the control of contagious diseases and for the care of other cases of illness or injury. An appropriation of $5,000 is asked for this purpose.

DORMITORY FOR YOUNG MEN—The present dormitories for young men are two in number: Storrs Hall, built to accommodate 66 students, and Gold Hall, with accommodations for 40 students. From force of circumstances three and often four students are assigned to rooms designed for two persons whenever the enrolment of male boarding students exceeds the above number (106).

The addition of a year to the courses of study, already approved by the Board of Trustees, will automatically increase the present enrolment and aggravate conditions resulting from crowded quarters. A dormitory to accommodate 75 students is much needed, and an appropriation of $75,000 is asked for this purpose.

EXPERIMENT STATION—While it is a department of the college, the experiment station is supported by separate and distinct funds. The experiment station is the research department of the college. The principal lines of investigation of the Storrs station are as follows.

In dairy husbandry the study of the effect of a high protein and a low protein ration upon the health and vigor of a dairy herd, upon the product of the herd, and upon the progeny. Records are being kept of the cost of raising all heifer calves to maturity. At intervals of three months, photographs are made of all young animals in the herd, and this furnishes a valuable means of studying development.

In poultry husbandry the principal experimental work now under way is an investigation of the bacillary white diarrhea of chicks. This disease is the greatest scourge of the poultry industry. The organism which produces this disease has been discovered, and some headway made in methods of prevention.

Other important investigations are being made in soil bacteriology in relation to soil fertility; dairy bacteriology in relation to the care

of milk; fermentation of silage; manufacture of fancy varieties of cheese, especially of Camembert and Roquefort; hybrids in beans; disease resistant varieties of melons, and control of melon diseases by spraying; forcing of tomatoes and cucumbers, with a study of diseases and insect pests of the greenhouse; artificial incubation of eggs in relation to the amount of carbon dioxide evolved.

In the matter of farm crops experiments are being conducted with alfalfa, potatoes, corn, and grasses, and studies are being made of lime and its various combinations as affecting soil acidity and soil bacteria. The present State appropriation is $2,000 a year, and a request is made that the amount be increased to $9,000 for two years.

ELECTRIC LIGHTS—Arrangements have been made with the Willimantic Gas & Electric Light Company to extend their line to the college campus. Storrs Hall, Horticultural Hall, and the new cottages were wired for electric lighting when erected. An appropriation of $6,000 is requested to meet the expense of wiring the remaining college buildings and for electric light fixtures.

FURNISHING DINING HALL—The legislature of 1909 granted an appropriation of $12,500 for the erection of a "temporary dining hall." As stated elsewhere, the building will be completed about February 1, 1911, and at a cost in excess of the legislative grant (see page 6).

The health and well-being of the student body is intimately associated with the character of service at the college commons. The raw material for the rations must be good, but the food must likewise be well cooked and well served. A modern equipment for the boarding club will tend to insure economy of management and a healthful and wholesome food supply. A range with broiler, baker's oven, steam table, tea and coffee urns, steam-jacketed kettles, boiler for steam and hot water service, dish washing machinery, linen and china closets, refrigerators, vegetable parer, dining room chairs and tables, crockery, silver ware, and linen will be needed. An appropriation of $5,000 is requested for this purpose.

AGRICULTURAL EXTENSION—As the term implies, agricultural extension is an activity that aims to extend directly to the farmer the results of scientific research and experiment. The demands upon the college faculty for speakers at farmers' institutes and granges often necessitate an abandonment of class schedules at the college and result in a detriment to the instruction of resident students. It will be necessary to engage several instructors specifically for extension work.

In co-operation with the Pomological Society the college has undertaken to carry on demonstration work in orcharding. The plan as outlined contemplates demonstration in the renovation of old orchards, proper methods of pruning, spraying, and cultivating trees, and the grading and packing of fruit. Two orchards have been selected, and it is expected that they will be the centers of interest to the communi-

ties where they are located, and will be used as places for field meetings for the State Pomological Society. An appropriation of $5,000 for two years is asked for the work of agricultural extension.

AGRICULTURAL BUILDINGS—An agricultural course for the training of young men for the profession of farming should provide instruction in each of three groups of subjects: (1) culture and mental discipline subjects such as mathematics, English composition, rhetoric and literature, German, history, political economy and civics; (2) sciences that bear directly upon practical agriculture—botany, chemistry, geology, zoology, veterinary science, physics, entomology, ornithology, and meteorology; and (3) vocational studies, including agronomy, horticulture, dairy husbandry, and poultry husbandry. These three groups of subjects are each essential to the training of young men for citizenship and for farming, and should have coordinate development in a system of agricultural instruction.

The facilities for instruction in the cultural and disciplinary group (1) and the sciences (2) are satisfactory for present needs. Aside from horticulture among the vocational studies the equipment and provisions for instruction are either incomplete, meager, or altogether lacking in the various branches.

The trustees have confined their requests for appropriations for strictly college educational purposes to the needs of the vocational group—Poultry School Building, Dairy Cattle Barn, Horse Barn, Farm Machinery Building, and an addition to the Dairy Building to accommodate agronomy and stock judging. It should be borne in mind that the income from federal appropriations is sufficient to pay the salaries of teachers in all lines of instruction, and can be used for the purchase of live stock, care and feed of live stock, and for laboratory equipment and supplies. The State is expected, however, to furnish the funds for the erection of buildings. The appropriation requested for agricultural buildings is $80,000.

ADDITION TO DAIRY BARN—The dairy cattle are housed at present in the basement of a building erected in 1890 for general farm purposes. With respect to light, ventilation, sanitation, and conveniences, it is excelled by the barns of hundreds of Connecticut dairymen. The proposed cement fire-proof annex, 40x100 feet in size, is planned for the housing of dairy cattle, the main barn to be retained and used for storage purposes.

ADDITION TO HORSE BARN—The present plan of development contemplates assembling under one roof all equine stock, driving, boarding, and department horses, and for the purpose of economy and efficiency placing them in charge of a competent and experienced care-taker. The cost of a cement fire-proof annex to the horse barn, 40x100 feet in size, is estimated at $10,000. The main barn would be used for the storage of feed, bedding, harnesses, wagons, and equipment.

FARM MACHINERY BUILDING—The scarcity of farm labor makes the employment of machinery on the farm a necessity. Much of this machinery is elaborate and complicated in construction, requiring mechanical skill and genius for its efficient operation. It represents a considerable amount of capital on which the farmer must pay interest. There is also a considerable waste due to neglect and unskilful handling of this part of the farm equipment. It is important that the student at the agricultural college receive training and instruction regarding the construcion, care, and economical use of farm machinery. An appropriation of $15,000 is needed for the erection of a building for the above purpose. A full line of farm machinery for instructive purposes can be obtained without cost to the college, as most manufacturers are willing to lend their wares for exhibition purposes.

POULTRY SCHOOL BUILDING — Dairying, horticulture, and poultry culture are the three agricultural industries of Connecticut. The horticultural department of the college is now well equipped with orchards, greenhouses, and buildings for instruction, and the dairy department with creamery and live stock, but the poultry department has inadequate buildings, poorly located.

The Cornell College of Agriculture has recently received an appropriation of $90,000 for the erection of a poultry school building. Other states are giving to this branch of agriculture more than in the past.

An appropriation of $25,000 is requested for the erection of a building 40x60 feet, two stories and basement: the basement floor to provide space for (a) killing room, (b) fitting room, (c) incubators and brooders, (d) egg and sales room, (e) laboratory, (f) lockers and toilets; on the first floor (a) judging pavilion, (b) incubator instruction and (c) incubator investigation, (d) reading room, (e) office, (f) private laboratory; on the second floor (a) winter course laboratory, (b) recitation room, (c) lecture room.

ANNEX TO DAIRY BUILDING—An appropriation is needed for the erection of an annex to the dairy building to accommodate (a) stock judging classes, (b) agronomy class room, (c) agronomy laboratory for seed testing, seed storage, corn judging and soil physics, and (d) an agricultural museum, for all of which no quarters now exist, and (e) office for farm superintendent, office and laboratory for station mycologist, and a room for photography, which are now provided for in the present structure, but which occupy space much needed by the departments of dairy husbandry and bacteriology.

INFORMATION IN RELATION TO THE INTERNAL AFFAIRS OF THE COLLEGE

MILITARY OFFICER—The land-grant and Morrill funds from the federal government are received on condition that instruction be

given by the college in military science. When an institution of Class B (land-grant colleges) has a capacity to educate at one time 150 men and has an attendance at military drill of not less than 100 men 15 years or more of age, the president of the United States may appoint an officer of the regular army to act as instructor in military science at said institution. This officer serves without expense to the state for compensation or quarters. Application was made by the trustees to the War Department for such an officer, and Lieut. James M. Churchill, 1st Lieut. 18th Infantry, was detailed to report at the Connecticut Agricultural College on September 1, 1910. The War Department not only furnishes an officer to act as instructor, but rifles are loaned, and ammunition, tents, and other equipment are supplied without expense. An unpublished order of the War Department provides that the minimum number of men in attendance shall not be less than 150, instead of 100 as heretofore, in order to retain the detail of an officer from the active list. The college will be unable to meet this requirement of the War Department unless the dormitory accommodations for young men are increased.

BY-LAWS OF THE TRUSTEES—By vote of the trustees a committee was appointed to draft a set of by-laws for the government of the board and to define the duties of the several officers of the college. The committee later presented a report which was accepted and ordered printed (Annual Report of the College, 1908-9).

SALARY OF POST OFFICE CLERK—Storrs post office is a substation of Eagleville. The salary of the Storrs post office clerk is now $300 per year, an advance of $100 per year from March 1, 1910.

SCHOLARSHIPS—"Twelve scholarships for graduate students have been established. These scholarships are offered not as gifts or benefactions but to make possible the employment of students as laboratory assistants and in similar work and to provide a means for compensating them for services rendered the college, at the same time assisting the holder in some special line of investigation and study.

"The value of a scholarship shall be at the rate of $150 a year. Services rendered shall not be less than the equivalent of twenty hours a week for thirty-six weeks of the college year. Applications for scholarships shall be made to the president before June 1st of the collegiate year preceding that during which the scholarship is held.

"Each 'scholar' shall pursue his studies under the direction of the professor in charge of the department to which the scholarship is allotted. The application for a scholarship must be accompanied by evidence of ability and general worthiness and must be endorsed by the head of the department in the line of work to which the scholarship is awarded. Vacancies due to resignations or other causes may be filled as they occur at the option of the authorities."

COLLEGE FARM—The college farm comprises 599 acres of leased and controlled land. By vote of the board this land has been assigned

for use of the several departments as follows:

(1) Forest Department: All wood land.

(2) Landscape Department (in charge of Horticultural Department): Campus and athletic field.

(3) Poultry Department: Land between north Eagleville road and the botanic garden.

(4) Botanic Garden: Land between orchard in rear of Storrs Hall and the poultry department.

(5) Farm Department: Valentine, Freeman, and Green farms, with exception of orchard and wood land.

(6) Experiment Station: Tillable land of Snow farm.

(7) Horticultural Department: (a) Crane farm with exception of 2, 3, and 4; (b) all orchards; (c) Rosebrooks lot and land between same and Gurleyville road.

This plan will take effect in 1911. No more planting will be made in the vineyard or "trial orchard" on the Freeman farm, and they will be abandoned as soon as is practicable.

MAXIMUM SALARY OF ACADEMIC PROFESSORS—The maximum salary of academic professors has been advanced from $2,000 to $2,200 per annum. This action is in accordance with that of educational institutions generally. The average salary of a full professor in sixty-one privately endowed colleges as reported by the Carnegie Foundation for the Advancement of Teaching was $2,249, and the average salary of a full professor in sixty-six state universities was $2,205.

BUDGET SYSTEM—At the beginning of the financial year from October 1, 1908, a budget system was adopted, based upon the total receipts of the college from fees, rents, and federal and state appropriations, and making net allowances to the different departments. The budget was formulated by Professor E. O. Smith after a careful study of the receipts and expenditures of the preceding five-year period. The plan is elastic, giving to each department at the beginning of the year a definite net allowance and putting a premium upon both reduction of expenses and increase of receipts.

ADDITION OF A YEAR TO COLLEGE COURSES—On recommendation of the faculty the board of trustees approved of the addition of a year of study to the courses for graduation. The courses now offered by the college are as follows:—

1. *Academic Course*—Two years of training in English, history, and mathematics. Designed for those who are not prepared to enter the regular course in agriculture, mechanic arts, or home economics.

2. *Agriculture*—A three-year course designed primarily for the training of young men for the profession of farming.

3. *Mechanic Arts*—A three-year course designed to give instruction in the line of drafting and machine-shop work.

4. *Home Economics*—A three-year course designed for training young women in the science and art of household management.

5. *Short Winter Courses* in dairy husbandry, poultry husbandry, and pomology.

6. *Summer School* of Agriculture and Nature Study.

ACADEMIC COURSE—Many sections of the state at present have inadequate high school facilities or none at all. To accommodate those who are unable to meet our entrance requirements, the two years' academic course is offered. No agricultural or other vocational training is scheduled in this course, and parents are advised to send their sons and daughters to their local high schools whenever possible. From an educational or financial standpoint this overlapping of instruction can be justified only as a temporary expedient and for reasons above stated.

STATION COUNCIL—At a meeting of the board on July 14, 1910, it was voted: "To discontinue the committee known as the station council, and that hereafter the station budget and the reports and recommendations of the station director be referred directly to the executive committee or to the committee of the full board."

SUMMER SCHOOL—The ninth annual session of the summer school of nature study and agriculture was held at Storrs in 1910 in conjunction with the Willimantic Normal Training School. Courses in agricultural subjects were offered in poultry husbandry, fruit culture, landscape gardening, floriculture, dairy husbandry, animal husbandry, soils and farm crops. A course in practical cooking was added. The total enrolment was 143, of whom 31 took work exclusively in the normal courses, 58 exclusively in the college courses, and 54 took courses in both schools.

The summer school has come to be recognized as a permanent feature of our institution, and the trustees have voted: "That beginning September 15, 1909, any member of the faculty may be called upon to teach in the summer school, and for such service compensation shall not be tendered in addition to that named in contracts then in force."

PAYMENT OF SALARIES—The salaries of instructors are now paid in twelve equal monthly instalments.

PROPERTY HELD FOR ACQUIREMENT BY THE COLLEGE—The Snow farm adjoining the college property on the south has been purchased by Mr. George S. Palmer and is being held for acquirement by the State. The Rosebrooks house and ten acres of land, the Phelps house and lot, the parsonage lot, and the Green farm of sixty-five acres have been purchased and are now being held for acquirement by the State in a similar manner. All of the above property is occupied and used by the college at the present time, and rented on the basis of 5% of the purchase price, taxes and insurance added.

REAL ESTATE PURCHASED—Four building lots comprising about two acres have been purchased of Mrs. E. B. Whitney.

COLLEGE AND CHURCH—Attendance upon religious service on Sunday is required of all students, except upon the written request to the contrary from parent or guardian. The pastor of the Second Congregational Church acts as chaplain of the college. Desirable seats are reserved for the accommodation of students.

TUITION, FEES, AND DEPOSITS—Students who resided outside the State at the time of original application are required to pay a tuition fee of $30 per year. The registration fee required of all students has been increased to $5 a term. The additional deposit required of all except day students upon the date of registration has been increased from $25 to $50 a year.

LANDSCAPE ARCHITECT—Mr. Charles N. Lowrie of New York, landscape architect, was engaged by the trustees to prepare a plan for the laying out of the college campus with respect to its future growth, taking into account the location and grouping of buildings, laying out of walks, drives, etc. Mr. Lowrie's report and a copy of the campus map and the plan for the farm group of buildings may be found in this report.

PERMANENT IMPROVEMENTS

APARTMENTS—In addition to the ordinary repairs to buildings, two well arranged and convenient apartments have been fitted up in Whitney Hall. This building now accommodates four families.

PAINTING—The farm barns, station office, chemical laboratory, main college building, Whitney Hall, Gold Hall, Valentine house, and Phelps house, have been painted during the year. The appearance of these buildings has been greatly improved.

REMOVAL OF BUILDINGS—Largely for esthetic reasons the horse barn is to be removed from the campus to the site selected for the farm group of buildings. The contract for the removal of this building has been let to Willis M. Ashborn.

Arrangements were made with the Ecclesiastical Society of the Congregational Church for exchange of lots and removal of the hearse house to a new site near the cemetery, and of the parsonage from the front campus to a position immediately across the highway.

The blacksmith shop has been removed to a less conspicuous position in the rear of Storrs Hall.

BOTANY AND HORTICULTURE—The special appropriation of $5,000 received from the last legislature for furnishing Horticultural Hall has been used for the purpose designated. The botanical laboratory has been equipped with an autoclave, an incubating and dry sterilizing oven, a Jung Thoma microtome, thirty comopund microscopes, and dissecting microscopes, tables, and general laboratory equipment for sections of thirty students. The horticultural class room has been furnished to accommodate fifty students. The balance of the appropriation has been expended for furniture and equipment

of offices, working laboratories, seed room, museum, spray room, and connecting greenhouses.

BOTANIC GARDEN—A botanic garden of about one acre in extent designed to serve as a field museum of agriculture has been planted. The larger section is given over to a systematic arrangement according to families of the most important economic plants. Thus among the legumes are shown growing in separate plots the various clovers, vetches, alfalfas, beans, peas, etc., as well as some of the more common wild leguminous plants. A section is devoted to plots illustrating the laws of variation and inheritance, and another section to children's gardens. The botanic garden is used for demonstration purposes and as a supply of material for class work in both college and summer school courses.

MILITARY—A large pit of earth and masonry with a revolving target has been constructed for rifle practice. A national and a state flag have been presented to the military company. A flag pole has been erected on the tower of the Main Building from which to fly the state flag on appropriate occasions.

WALKS AND DRIVES—A cement walk has been built connecting the Main Building and Storrs Hall. A carriage road has been constructed leading from the campus to the four cottages recently erected on property purchased from Mrs. E. B. Whitney.

WATER MAIN—A four-inch water-main has been laid from the water tower south to the new cottages, a distance of 1,800 feet, and in the opposite direction to the new dining hall and to the dairy building, a distance of 1,200 feet.

CHEMICAL LABORATORY—The second floor of the chemical building, formerly used as a laboratory for physics, has been remodeled to accommodate classes in quantitative chemistry.

PHYCICS LABORATORY—The third floor of the Horticultural Building has been finished off and equipped for a laboratory and class room for elementary physics.

CHANGES IN OFFICERS AND FACULTY

TRUSTEES

Term of Office Expired in 1909

CHARLES A. CAPEN ..... Willimantic, Conn.
GEORGE S. PALMER ..... New London, Conn.
B. C. PATTERSON ..... Torrington, Conn.

Appointed by the Senate for Four Years From July 1st, 1909

CHARLES A. CAPEN ..... Willimantic, Conn.
CHARLES M. JARVIS ..... New Britain, Conn.
JOSEPH W. ALSOP ..... Avon, Conn.

Elected by the Alumni for Four Years From July 1st, 1909

H. G. MANCHESTER ..... Winsted, Conn.

Elected by the Board of Agriculture for One Year From July 1st, 1909

D. WALTER PATTEN ..... North Haven, Conn.

Elected by the Board of Agriculture For One Year From July 1st, 1910

D. WALTER PATTEN ..... North Haven, Conn.

OTHER APPOINTMENTS

MARY CUSHING ROGERS,
of the Noyes School of Expression, to be instructor in elocution.

LIEUT. JAMES M. CHURCHILL,
1st Lieut., 18th Infantry, U. S. A., to be professor of military science and commandant.

LILLIAN E. BERRY,
of Waterville, Me., to be instructor in music.

SAMUEL N. SPRING, M. F., Yale,
to be lecturer in forestry.

BURT KIMBALL DOW, V. S., Ontario Veterinary College,
to be lecturer in veterinary science.

CHESTER D. JARVIS, B. S. A., Ontario Agricultural College, Ph. D., Cornell,
to have charge of orchard demonstration.

HERBERT K. JOB,
to be lecturer in ornithology and state ornithologist.

WALTER JOHN LANE, A. B., Dartmouth,
to be assistant in chemistry.

FRED CONRAD GUNTHER,
of Huntsinger's Business College, to be chief clerk.

SUSAN DUNTON RICE,
of Simmons College, to be steward.

HOWARD DOUGLAS NEWTON, B. S., Amherst Agricultural College, Ph. D., Yale,
to be instructor in chemistry and physics.

MAUD E. HAYES,
of Teachers College, Columbia University, to be substitute professor in home economics.

ELIZABETH DONOVAN,
to be assistant in home economics.

CHARLES F. STEPHENSON,
to be instructor in poultry husbandry.

EDNA E. JACKSON,
to be assistant in bacteriology.

WILLIAM M. WILSON,
to be florist.

RESIGNATIONS

ORPHA CECIL SMITH,
Instructor in elocution, to accept a position in Alberta College, Edmonton, Alberta.

ABBY MINOT HICKS,
Instructor in music, married.

HERMON DEANE EDMOND, B. S.,
Instructor in military science, to devote entire time to department of chemistry, Storrs Experiment Station.

AUSTIN F. HAWES, M. F.,
Instructor in forestry, to accept a position as state forester of Vermont and forester of the Experiment Station.

ERNEST D. PROUDMAN,
Chief clerk, to accept a position at Hampton Institute, Va.

REV. OREN DENNIS FISHER, A. M., B. D.,
College chaplain, to accept position as pastor, Congregational Church, South Windsor, Conn.

FRED GLASS MASON,
Assistant in poultry husbandry.

CHARLES F. STEPHENSON,
Instructor in poultry husbandry, to accept position with the Hall Mammoth Incubator Co., Ithaca, N. Y.

GRACE E. SEAGE,
Assistant in bacteriology, married.

Leave of absence for one year, Alberta Tullia Thomas, professor of home economics.

FACULTY PROMOTIONS

JOHN NELSON FITTS, B. Agr.,
From instructor to associate professor of mechanic arts.

GEORGE HERBERT LAMSON, JR., M. S.,
From instructor to associate professor of entomology and geology.

EDWARD BLODGETT FITTS,
From assistant to instructor in dairy husbandry.

HOWARD DOUGLAS NEWTON, Ph. D.,
From instructor to associate professor of chemistry and physics.

Attention is invited to the financial reports of the college and the Gilbert Farm, to the reports of the State ornithologist and landscape architect, and to the reports of the several departments of the college.

Respectfully submitted,

CHARLES L. BEACH.

Gilbert Farm

There has been no change in the policy or management of Gilbert Farm during the past two years.

The farm is practically self supporting, the income from the sale of milk and live stock paying all operating expenses, and the dividends from the stock in the Gilbert and Bennett Manufacturing Co. being used for permanent improvements. Some might think that the farm should show a large profit, but it must be remembered that however desirable a profit may be, money making is not the primary object of this farm. Its object is to demonstrate the principles and practices of agriculture as taught by the various departments of

The Connecticut Agricultural College. Visitors are always welcome, and we aim to have the barns, stock, crops, etc. ready for inspection at all times. The Superintendent's time is given freely to visitors, explaining the various operations. We are gratified that so many farmers of the locality, especially beginners, come to the farm for advice and help.

The high standard of milk produced has been maintained, it in Stamford was reported to contain 2,000 bacteria per C. C., and sample at the annual meeting of the Conn. Dairymen's Association in 1909, and being the only sample to score 99 at the annual meeting in 1910. A recent bottle sent to Dr. Conn of Middletown by a customer in Stamford was reported to contain 2,000 bacteria per C. C., and tested 5.2% fat. The milk shipped away is now all bottled at the farm, and the price has been raised to 9c. a quart wholesale. One member from each graduating class is selected to take charge of the dairy work for a year. The flourishing condition of the Gilbert and Bennett Manufacturing Co. has increased the population of Georgetown so that 150 quarts of milk a day are demanded of Gilbert Farm.

The north barn has been improved so that its convenience and sanitary conditions are now very satisfactory. The east side, which had a trench but had never been fitted up with stalls, is now complete with Louden iron stalls and stanchions and continuous cement mangers.

The west side of the barn has the original individual wooden mangers and water buckets, thus affording an opportunity to test the arguments for and against two practical systems. A track has been installed on both sides. The manure is shoveled into a Louden carrier, dumped into a steel water-tight wagon body, and spread on the field daily. The ceiling has been sheathed with North Carolina matched pine, and the King system of ventilation has been installed, which is working very satisfactorily. The barn now has sixty stanchions, five box stalls, and a laboratory on the same floor. The milk runs through a floor funnel to a lower level, where it is cooled and bottled. Over the cows three bins have been built, holding a carload each for storing grains and sawdust. Hay track and hoisting apparatus are so arranged that hay, grain, and bedding are easily raised and placed by the gasoline engine.

The hay scales have been placed in front of the barn, so that hay and corn can be conveniently weighed as they are hauled in. One measured acre of Early Mastodon corn weighed over 27 tons this fall. This was grown on a very rocky field, planted to corn the third year in succession, and it had not had any commercial fertilizer.

TUBERCULOSIS—The semi-annual tuberculin tests have been marked by the steady decrease in the number of animals responding. In the fall of 1909 only two animals responded. One had just been purchased and had never been tested. The other was "Beauty," a registered Hereford, the only bovine left that was on the farm when

it was given to the college. The herd will now be tested but once a year. And as calves are raised to replenish the herd instead of buying, we hope that it may be kept free from the disease.

SHEEP have been removed to the East Farm, where the old barn has been put in repair to accommodate them. Dogs have done considerable damage, but the shot-gun of the Swiss attendant has sent most of those dogs where all sheep-killing dogs should go.

NEW ROAD—The greatest improvement undertaken is the new road from the Georgetown and Redding highway running northeast across the original boundary, where one-half acre of land has been purchased from John K. Anderson, there turning and running southeast to the barn. It was laid out in the fall of 1909 by Professor Wheeler and Mr. Welden. It is a little longer than the old road, but is a steady incline and does not exceed a 6% grade. It is being built by the farm teams and men at such times as they can be spared from the regular farm work, and will probably not be usable before December 1, 1911, and not completed for at least a year later. Field stones and old walls are being used generously in the fills of the road layout.

Up to date the dairy phase has received the greatest attention. We hope still to improve the quality of the herd, but do not purpose to greatly increase the number.

Representatives of the U. S. department of agriculture are planning to co-operate with the farm management in carrying on some experiments to improve the pasture on the farm.

We feel that the dairy and sheep departments have been well provided for, and should now pay their way; and when the road is completed, if regular dividends are received some other lines of investigation or education should be started.

L. J. STORRS,
J. W. ALSOP,
A. J. PIERPONT,
Gilbert Farm Committee.

Agronomy

The instruction given by this department during the past two years has been given to constantly increasing classes, as many as seventy students having been registered at one time. The various subjects in which instruction has been given are as follows: Soils and fertilizers, rural economics and farm management, farm crops, soil physics, seed testing, and farm machinery. The students enrolled in these subjects have been the regular college students. In addition lectures upon soils and farm crops have been given to students in both the summer school and the winter short courses in dairying and

poultry husbandry. All students taking the regular agricultural course are required to take the instruction in soils and fertilizers, rural economics and farm management, and farm crops. These courses are also very generally elected by students taking the associate course in agriculture.

SOILS AND FERTILIZERS—This course is given in the fall term of the third year and requires five hours per week of class room instruction and one afternoon per week during the first six weeks in field laboratory work. While the principles discussed are general in their application, special emphasis is laid upon the management of New England soils. Problems relating to soil fertility, crop rotation as influencing soils, underdrainage, humus supply, home mixing of commercial fertilizers, and care and use of farm manures are fully discussed.

RURAL ECONOMICS AND FARM MANAGEMENT—This course is given in the winter term to all agricultural students in the fourth year. In addition to the regular students taking this work the winter course students in dairying have also attended the lectures. The subjects discussed in this course are those which relate to the business of farming. Considering the farm as a factory, those problems are studied which relate to economy of production, farm equipment, arrangement of fields, and the marketing of the products. The recent widespread interest in rural life has made especially important the relation of the farmer to the rural school and church, to good roads, co-operation in buying and selling, and farmers' organizations. All of these subjects are discussed in this course.

FARM CROPS—A course of five hours per week of lectures and three hours per week in the field laboratory. Discussions are confined entirely to the crops grown in New England. Management of grass lands, the growth of corn, potatoes, alfalfa, clovers, buckwheat, rye, oats, barley, wheat, and root crops are among the topics considered. A special expert on tobacco growing is usually secured to give one or two lectures on that subject.

The college farm and the experiment station fields furnish illustrative material for the laboratory work of this course. The classes have become so large that only to a limited extent are students enabled to do any of the actual work on the farm.

Advance courses are offered in soil physics, seed testing, and farm management, but owing to the lack of laboratory facilities the number of students taking these courses has been limited.

SUMMER SCHOOL—During the summer school two courses have been offered in agronomy, a two-weeks course of lectures on soils, and a two-weeks course on farm crops. While the students who have been registered in these courses have been, for the most part, teachers in the public schools, yet the instruction has been given as it would have been given to a class of practical farmers. If agriculture is to have a place in our public school system, it should be because it

appeals to the practical side of life, and the subject must be taught in a practical way.

WINTER COURSES—Winter course students both in dairying and poultry husbandry have been given three to four lectures per week on subjects relating to soils, farm crops, and fertilizers. These students are drawn almost entirely from the farm and expect to return to the farm. It is doubtful if any instruction given in the college is of more immediate value to Connecticut agriculture than that given to these winter-course classes.

THE COLLEGE FARM—The farm should be the most important adjunct to the agronomy department. Here should be practiced the best methods of soil preparation, fertilization, planting, spraying, and caring for crops. Here should be illustrated modern methods of land drainage, field improvement, fence construction; and here should the class-room instruction in agronomy be fully illustrated and exemplified. The main purpose of a college farm should be educational.

The difficulty which has been experienced in realizing these ideals has been the general college demands upon the time of the farm men, teams, and equipment. The farm work should have the right of way over other miscellaneous labor, and some definite progress should be made each year in the way of improving the farm fields.

NEEDS OF THE DEPARTMENT—The work in agronomy is fundamental for all lines of agriculture. It is the one department where all the courses given as undergraduate work are required of all agricultural students and the courses of which are elected by nearly if not all associate students in agriculture. All winter-course students have work in agronomy as an essential part of their schedules.

The time has now arrived when to properly provide for the work in agronomy a well-equipped laboratory is needed. This building should provide class rooms and offices and laboratories for the work in soil physics, farm crops, farm management, and seed testing. Not only would the undergraduate courses thus be provided for, but an excellent opportunity would be offered for graduate and research work. As plans are now being made for the development of the college, one building should be planned for, to be known as Agriculutral Hall, and in this building the department of agronomy should be provided for. Separate buildings have already been erected for horticulture and dairying, and others are being planned for poultry husbandry and farm machinery. The needs of the department of agronomy are fully as great as those of the departments mentioned, if the work is to develop as its importance demands.

Respectfully submitted,

L. A. CLINTON.

College Farm, Horse Barn, and Animal Husbandry

During the past two years the usual hay, corn, potatoes, rye, and root crops have been grown. Both seasons proved to be extremely dry, but fairly good crops were produced.

One six-acre field which has been pastured in recent years was cleared of a large quantity of stones and placed under cultivation. The Snow farm was again rented, and the brush along the roadside cleared up, adding much to the appearance of the road approaching Storrs from the south.

Not much has been accomplished around the new piggery since the early winter of 1908, when it was finished and made ready for occupancy. Cement troughs, milk vats, and feed bins were then built, and a 2 h. p. boiler installed for heating water, cooking feed, and regulating the temperature of the building in extremely cold weather. The building has proved fairly satisfactory for winter quarters, but pasture and land for forage crops are needed for summer use.

The department lost one horse by accident during the season of 1909. She was replaced by another this spring, and the sale of one team has since been authorized with permission to replace them by a pair of registered Percheron mares.

Our wagons and older tools were painted by farm help last fall. The usual amount of teaming has been done, and considerable land cleared for use of other departments, including the botanical department, school gardens, and experiment station. The grading around the new dining hall was also placed in charge of this department. More pasture has been cut over than usual, and some new land cleared. The drainage of a four-acre field north of the pond has been authorized, but owing to lack of help and pressure of other matters it is not yet started.

The department has had part of the time of a stenographer and clerk since February, 1909, and an attempt has been made to keep strict accounts of all crops and departments, also to classify all labor. With the improved office equipment and this assistance, it is expected that the educational value of this department will be greatly improved.

The various departments of the college and station made an exhibition at the Hartford and Connecticut State fairs the last two years, and while much could be criticized in the way this enterprise turned out, it seems to be a good thing on the whole and should aid in placing the college before the public.

The horse barn department was placed in my charge late in the fall of 1908, and it is my aim to make it as practical as possible, serving the needs of the college in the transportation of passengers

and express, supplying a limited livery service, and providing such animals for use in class work as are available in our present equipment. Some new wagons have been added, and others have been repaired and painted. The barn is to be moved soon, and plans for a new stable are being considered.

The principal needs of the above departments, as I now see them, are a new stable where all the horses can be kept together and suitable storage for wagons and machinery provided at a convenient point, and more horses or an automobile bus to relieve the pressure of the passenger service to Eagleville, also to relieve the pressure on the farm teams at the busiest seasons. The fences should be improved, and the standard of our live stock raised.

In animal husbandry the usual line of work in breeds and types of animals was followed, using lectures for practically all the classroom work, and in the laboratory periods using such animals as were available here at the college besides taking two or three trips to see stock of different kinds. Eight steers were fed and used in class work in 1908. Later a part of them were butchered, and the remainder were sold alive. Arrangements have been made for another lot of beef cattle to be handled in the same way. The experiment station's flock of Shropshires has been sold to the college. Some of them have been disposed of, and others added. There should be provided more animals of various kinds and types for use in animal husbandry.

Respectfully submitted,

H. L. GARRIGUS.

Dairy Husbandry

The work of the dairy department is divided under two general heads: (1) the work of dairy manufactures and (2) the work with the dairy herd.

Dairy manufactures includes the handling of milk and its products in the creamery. Instruction is given in proper methods of cooling, aerating, bottling and separating milk; in the cooling, ripening, and churning of cream; in the manufacture and handling of butter by both dairy and creamery methods. A limited number of cheddar cheese are made each year, and some instruction is given in the methods of making a few soft cheeses.

Under this heading is also given instruction in testing milk for specific gravity, butterfat, total solids, acidity, adulteration, and preservatives; the handling of milk for immediate consumption, and the requirements of state and city board of health in regard to sanitary conditions of barns and creameries.

On the side of production a study is made of all the factors pertaining to the breeding and handling of a dairy herd. The college

herd consists at the present time (November 22, 1910) of sixty-two head of neat cattle. Of these thirty-three are milch cows, six are bulls, and the remainder young heifers.

Careful records are kept of the work of breeding up the herd, and of the amount and cost of milk production.

NEEDS OF THE DEPARTMENT—In the creamery the department is seriously cramped for laboratory room. The classes have been increasing in numbers, and the testing and hand-separator rooms have been especially crowded.

In the barn the conditions are far from satisfactory. The stable is not well lighted or ventilated, and cannot be on account of its location.

It is desirable to increase the size of the herd in order to furnish more of the dairy products required by the college boarding department. This cannot be done until more barn room is provided. It is especially imperative that the sanitary conditions of the stable and surroundings be brought up to modern standards.

Respectfully submitted,

J. M. TRUEMAN.

Horticulture and Care of Grounds

The recent change in the course of study has much modified the classroom work, making more sections and adding to the hours required. The completion and furnishing of the laboratory at the beginning of the year much relieved the situation and has enabled the instructors to provide much better for the students taking the course. We now feel that the facilities for indoor instruction equal those already furnished outside by the campus and various fruit plantations.

In addition to the usual routine work in the classroom and caring for the campus and various orchards and gardens, much time has been devoted to putting the grounds in permanent shape around the recently constructed buildings. Late last year the grading was completed around the new laboratory and range of greenhouses, and the past season the grounds in the vicinity of Storrs Hall were graded and partly planted and the drive to the new residences was partly built. This labor of finishing the campus accumulates faster than the department with its present equipment of men and teams can handle it and carry on the regular work. There is also much tree planting requiring immediate attention, with the stock in the nursery ready for removal. There should also be constructed large amounts of walks and some drives to connect buildings recently constructed and in process of erection. Every new building, particularly a laboratory, adds to

the requirements in these directions. A limited amount of concrete walks has been laid each season where absolutely necessary, but much more is required.

Rather light crops of apples were grown in 1908 and 1909, as was the case throughout the state in these years and also in 1910. But the trees in the college orchards have produced this season the heaviest crop grown upon them since the college had them in charge. It has required the full working force to gather and ship before winter weather, and lack of proper storage room has added to the difficulty and expense of harvesting the crop.

Nearly all other fruits produced a fair crop. The rapid increase of peach yellows and plum rust in the state the past two seasons did not overlook the college orchards, and required the removal of almost all the plums and of many valuable trees in the trial peach orchard. Other matters connected with the orchards are referred to at length in reports on orchards transmitted herewith.

The call for exhibits at fairs and meetings, and to furnish judges to act at the same, continually increases, and much time has been devoted to these types of work during the past autumn. The recent expansion of our course has enabled us to give some time to fitting young men to work along these lines. The department has responded to several calls the past season to furnish specimens from the trial orchard for educational purposes at other institutions.

The removal of the large barn from the campus will require that some provision be made next season for keeping the teams and horse tools of the department. With this another urgent requirement is a fruit-storage house in which to pack and store the products of the growing orchards. The greenhouse range has been ably handled by Mr. William M. Wilson, who succeeded Mr. L. M. Parker in June, 1909.

Much of the detail work and some of the instruction, especially in the winter short course, has been efficiently performed by Mr. A. T. Stevens, instructor of the department.

THE COLLEGE COMMERCIAL ORCHARD—The land on which the orchard was planted was chosen because it was the only tract on the college farm large enough, and reasonably level, that had been under cultivation previously, or could be easily put into condition. It was far from being ideal apple orchard land, the soil being very light, and it has since been proven that the greater portion was more valuable for peaches than apples, although the general location for either was very fine. But the college did not wish to go extensively into peach growing. The tract had not been cropped previously for fifteen years, yet while open could not be called pasture, as it did not have a solid sod on a great part of it, being decidedly run-out land, the soil sandy with many small stones and some large loose boulders on the surface.

The lot was broken up in the late fall of 1899, and some of the small stones were removed. The proposition as it then stood was to

build up the land and grow an orchard at the same time. In the spring of 1900 the land was nearly cleared of the large stones and many small ones, the whole thoroughly worked with a harrow, and planted with apples for a permanent orchard; trees two rods apart each way, rows running lengthwise nearly north and south. The kinds planted were Baldwin, 100; Sutton, 100; R. I. Greening, 55; Rox. Russet, 55; Ben Davis, 25; Red Canada, 25; Northern Spy, 50; Jacob's Sweet, 10. The Northern Spy was top grafted a year or two later, one half each to Jonathan and Esopus Spitzenburg. The smaller lots were put in to test the values of these kinds in orchard work in this state. Then about two acres at the northern end was planted with fillers, using 250 peach trees. After omitting a space of about an acre to the south, another strip was filled with 100 Japan plums. Again omitting a strip, another space was filled with 100 early bearing apples, embracing McIntosh, Oldenburg, Wagener, Wealthy, and Hubbardston. This interplanting placed the trees all one rod apart each way in all the filled places. All trees used were grown in the college orchard, the apples being three and four years from root graft, the plums two years, and the peach one year buds.

All the commercial fertilizer used that season was applied at the time of planting, some in the holes as the trees were put in, and the balance on the surface. Shortly after the surface was sown with cowpeas except a space each side of the tree, rows wide enough to keep clean with a one-horse cultivator. This was thoroughly worked all the season. The peas made a very strong growth, and were plowed in the next spring. The orchard has been plowed once each season since, usually changing the direction each year, then cultivated or covered with cow peas each summer, following in the fall with a covering of crimson clover for the winter. No effort was made to grow crops, but to bring up the land. A small part was cropped a season or two for special reasons. Since the fifth year very small amounts of commercial fertilizer have been used, but in the filler sections stable manure has been applied since the trees came in bearing.

During the winter of 1903-04, nearly 100 of the apple trees were seriously injured or killed by collar injury, for no known reason, as none of the stone fruits suffered, nor has it occurred since on any. Most of these have been replaced since, making the trees somewhat uneven in size. The loss of permanent trees was largely Sutton, Rox. Russet, and Northern Spy, top-grafted to Jonathan. Of the fillers Hubbardston only was serious. In growth R. I. Greening, McIntosh, Ben Davis, and Red Canada have done well. They seem suited to the situation. Sutton and Roxbury Russet have proven very unsatisfactory; the first at least must have heavier soil. Nearly all other kinds have grown as strong as expected.

As already stated the peaches have proven very successful, and have grown well from the first. This planting was also partly a test of varieties for orchard use. The most valuable are Elberta, Mt. Rose,

Carman, Champion, Old Mixon, Fox Seedling, Smock, Salway, and Greensboro, or about those used generally throughout the state. One idea was to have a succession for local trade, and no large amount at any time. A sharp freeze previous to the fourth season killed the buds, so the first crop was in 1904. These trees now, at the end of 1910, have borne six fair or full crops. Up to date the orchard has been very free from yellows, and all losses replaced the first seven years. The trees had the wood much weakened in the cold winter of four years ago, and the limbs break easily with loads of fruit. For the benefit of the apple trees the peaches will soon be removed, but as a source of profit they would be worth the more for some time.

The Japan plum fillers, Burbank, Abundance, Wickson, Satsuma and Red June all did well so far as growth and fruiting are concerned, the soil being as favorable for them as for the peach. Wickson is tender in bud, so only two crops have been obtained. The others have borne more or less for seven years, usually requiring heavy thinning. But in 1908 black knot, which showed some each season, took a virulent form, necessitating the removal in 1909 of nearly all the trees except Abundance. The latter were all removed the past season.

As to the filler system, the peaches have returned more income than the total expense of the whole orchard to date. But for all that, I should not use peach as fillers. Upon land as well adapted to peaches as this tract is, peaches only should be grown, and the treatment given be adapted to that fruit. There is plenty of good apple land not suitable to peaches. This should be used, and the requirements of apples applied.

Much the same may be said of Japan plums as fillers, but they do not overgrow the apples at first as does the peach. However, if the recent outbreak of black knot is to continue for several years, the plum cannot be considered.

The proper fillers for apples are apples. All can then be given the same treatment. The returns will not be as great at first, but the permanent orchard does not run as much risk of being injured, and all grow into more satisfactory trees.

Now, at the close of the eleventh year, all of the original plantings of apples have borne more or less, Ben Davis and McIntosh leading in quantity, closely followed by Oldenburg, Jonathan, and Wagener. In size and evenness of growth, Ben Davis, McIntosh, and R. I. Greening are in the lead, not a tree of these failing from the start. For future use I should plant the McIntosh as permanent trees, the growth being strong, unless a whole block were planted of that variety, expecting to thin later. Jonathan have borne continuously since the grafts were old enough, but growth of tree is slow, and the total crop is not great. Wagener was the first variety to produce fruit in the orchard. Its biennial habit of bearing can no doubt be overcome by judicious thinning. Baldwins have grown moderately but have not set much fruit.

They also need stronger soil. Nearly all the varieties in this orchard are growing in two or more places on other parts of the college farm, and those trees are used somewhat as a basis of comparison.

The expense of planting and growing the orchard the first five years was as follows:

	1899	1900	1901	1902	1903	1904
Breaking up	$35.					
Removing stone		54.25				
Trees		95.				15.
Chem. fertilizers		90.	81.	46.75	41.50	38.50
Cow peas and clover seed		16.	17.	16.50	13.	10.
Labor		75.80	45.75	84.45	64.90	67.75
Totals	$35.	331.75	143.75	147.70	119.40	131.25

A total of $908.85 for 10½ acres of land, besides interest on value of land, in this instance very low, and on money paid out. From which it can be inferred that an attempt to bring up land and grow an orchard is not a cheap method. But it can be done. The figures are verified to some extent at another farm where land is being planted to orchards under some of the same conditions and known to the writer.

As a matter of fact the crop of peaches grown in 1904 more than paid the whole expense of that year, and the five later crops have paid all the cost of the orchard before, and since, to date.

No doubt there are many instances where it would pay better to put more in first cost of land, securing that already in condition to grow trees, and perhaps obtaining profitable results more quickly. But if not easily or conveniently obtained, then poor land can be taken and made to become profitable.

THE COLLEGE DWARF APPLE ORCHARD—Much interest has been taken in the growth of dwarf apple trees the last few years. Consequently the block of those trees planted on the college grounds eight years ago, and materially enlarged more recently, has attracted much attention.

The writer had some experience in growing this type of trees about twenty-five years ago, and as a result the planting of the college block was begun as a place to keep proven varieties for cions, as well as to grow fine specimens of the fruit. Among the later plantings a block of about fifty trees of two varieties has been put in to test the trees from the commercial standpoint. The whole block now embraces about 350 trees, one-third on doucin, the balance on paradise stock, the commercial test being on the first, the remainder embracing over 200 kinds, one to two trees each. Those on paradise stock are planted 8¼ feet apart each way, the others ten feet. The oldest, now eight years grown, readily permit a horse with pump on stone drag to pass through. Some kinds have borne apples three years, but the

past season several bore partial to full crops of various quantities up to a bushel. As none of the oldest trees are of common standard sorts, the success of those cannot yet be stated.

The land where the trees are growing is fairly good apple soil, and in fair condition. The cultivation has been clean till the trees are four years old, then the soil has been allowed to grass down and has been mowed over three or four times in a season. Very little fertilizer has been used from the first. As the trees come into bearing some potash will be used. The pruning has been to keep the trees headed very low, about one foot, with many short jointed branches, and in flat, round form.

Visitors readily admit the beauty of the trees, and the convenience of handling, but cannot see how a profitable crop can be grown on such small trees, forgetting that there are 435 to 640 trees per acre, and that a very moderate amount per tree would make from one to two hundred barrels per acre. The crop the past season shows this to be not only possible, but very probable.

The size of the trees makes expense of handling very light and enables the growers to have every apple perfect. The claim usually made of very early bearing is not proven, but probably a year or two is gained over the same kinds as standards. So far as health and vigor go, the trees seem to fully equal those on standard stocks, no more losses either in planting or since having occurred than would have taken place in ordinary types.

The orchard already indicates that some varieties are better adapted to this treatment than others; that is, very strong growers such as Hurlbut or Fallawater had better be omitted. Another year or two will determine how well known kinds succeed.

Probably the most frequent use of this type of trees will be in gardens and small places, as they are now much used in Europe; but in the hands of a skilful orchardist they can be made successful any where, and on doucin stocks at least may be profitably used as fillers in standard orchards.

Respectfully submitted,

A. G. GULLEY.

Extension Work in Horticulture

I have the honor to submit herewith my first annual report as superintendent of extension work in horticulture. A very satisfactory beginning has been made in the way of demonstrating orchard methods in cooperation with the Connecticut Pomological Society. For this purpose arrangements have been made with two farmers for the use of their orchards. These orchards are located at Cheshire and Pomfret respectively. The owners of the orchards agree to follow the ad-

vice of the college representative, to bear all expenses in connection with the management of their orchards, and to admit visitors to their places to witness the various operations. Notices were sent out to the farmers of the neighborhood inviting them to be present at the time of pruning, spraying, and tilling of each orchard.

THE CHESHIRE ORCHARD—This orchard is located on the farm of S. A. Smith's Sons, on the New Haven and Waterbury trolley line at Ives Corner, a short distance south of Cheshire. It comprises about four acres and is of two ages. The trees in the older section are about fifty years old, while those in the younger section are not more than ten years of age. The old trees had been in sod for many years and had been neglected in every way. San Jose scale had become well established, and the owners had given up hope of saving the trees. Many of the trees were forty feet high and filled with brush.

This orchard was selected especially for the purpose of demonstrating the methods and possibilities of renovating old and neglected apple orchards. For the purpose of comparison only two rows were operated upon. These old trees were very severely pruned, many branches twenty to thirty feet long being removed. The young trees were in fairly good shape and required less heroic treatment. After pruning, the trees were thoroughly sprayed with soluble oil. The sod was broken up with a cutaway harrow, and the soil was kept well tilled during the summer. Potash and phosphoric acid fertilizers were applied, and about August 1 a clover cover crop was sown. The clover made a good start and looks good at the present time.

The results of such treatment have been very encouraging. The trees have made a good growth, and the foliage presents a healthy appearance—a conspicuous contrast with those of the untreated section. The owners, who were more or less doubtful over the outcome, have decided to treat the whole orchard in the same way. Many neighbors also, who intimated to Mr. Smith that such treatment would surely kill the trees, have now commenced to renovate their orchards in the same manner. At least one hundred people attended the pruning demonstration, and about half that number were present for the spraying and tillage demonstrations.

THE POMFRET ORCHARD—This orchard is located on the farm of M. Joseph E. Stoddard, adjacent to the Willimantic and Boston line of the New Haven railroad, midway between Abington and Pomfret. The orchard, which is ideally situated and about twenty-three years of age, embraces about fifty trees of various varieties. It was a fairly typical farmer's orchard, but had become seriously infested with San Jose scale and was selected especially to demonstrate to the farmers in that splendid apple section the method of controlling this pest on large apple trees. The trees required very severe pruning to insure thorough spraying. The further treatment was the same as that given

the Cheshire orchard. A fair crop of excellent fruit is being harvested at the present time. About fifty farmers of the vicinity attended each demonstration in this orchard.

Respectfully submitted,

C. D. JARVIS.

Poultry Husbandry

No radical change has been made in the work of the department during the past two years. Instruction of regular students has been in accordance with the schedule.

The eighth annual winter course in poultry husbandry was given during the winter term of 1909, and the ninth at the corresponding time in 1910. In each case the class was as large as could be accommodated comfortably.

A short course in poultry husbandry was given in conjunction with the summer school in 1909. This was, I believe, the first summer-school course of this character ever offered, and though advertised but a short time the work attracted to the institution a fine class of students. The course was offered again in July, 1910, and the enrollment was most satisfactory, the class being much larger than the preceding one. It is evident that such a course can easily be made popular, and that it will particularly interest teachers and business and professional people who cannot arrange to be present at any other season of the year.

At the close of the 1909 summer school the Connecticut Poultry Association held a two-day field meeting here. This was the first two-day meeting of this character held by the association, and it proved a decided success. Another similar gathering followed the 1910 summer school, and it is evident that this event can be made a fixture among the annual agricultural meetings.

The correspondence of the department remains heavy. Addresses on poultry topics have been delivered at many institutes and at grange and poultry association meetings.

At the poultry plant an effort has been made to improve the average quality of the stock. At present we have good flocks of eight of the more popular varieties of poultry. There is also a good flock of ducks, representing two breeds.

At this time it seems wise to call your particular attention to the needs of the department. There is a strong and increasing demand for instruction in poultry husbandry, and this is particularly pronounced in New England, where poultry keeping is a most important branch of agriculture. This institution was one of the first to erect a poultry plant and offer courses in poultry husbandry, and though the plant was satisfactory under the conditions then existing,

it falls far short of meeting present requirements. Practically all of the buildings are poorly constructed and in a poor state of repair, and they do not embody modern ideas of construction.

The amount of suitable land available at the present location of the plant is not sufficient to meet our requirements, and as a result we are compelled to conduct a part of our operations on a piece of swampy land which is unsuitable. Finally, we are without proper office, laboratory, and class room facilities, which makes it necessary for us to use space in buildings devoted to the work of other departments. Such an arrangement is most inconvenient for all concerned.

If it seems best to attempt to place the work of this department on a par with that of the excellent departments of horticulture and dairy husbandry, it will be necessary to provide equipment of a similar character to that possessed by these departments. In the absence of such equipment we cannot do our best work.

In view of existing conditons I would strongly recommend that there be assigned to this department a suitable tract of land of sufficient area to meet present and future requirements, and that immediate steps be taken to provide the necessary buildings and other equipment.

Respectfully submitted,

F. H. STONEBURN.

Chemistry and Physics

My work as instructor of chemistry began with the opening of the winter term, 1909. Throughout the remainder of the college year instruction was given to some forty students in elementary chemistry and to one student taking the sixth-year advanced course in agricultural chemistry. The instruction in elementary chemistry was given by lectures and by the use of a standard text-book, supplemented by the necessary amount of laboratory work. During the course special stress was laid upon those chemical changes which have a direct bearing on agricultural subjects. Owing to the overcrowded condition of the laboratory—two students working where but one student should have worked—the results obtained, although fairly good, were far from being satisfactory.

The work in advanced chemistry could not be carried on as outlined in the catalogue because of the lack of apparatus and laboratory room. A course in qualitative analysis, which requires little apparatus and less working space, was therefore given. This work was supplemented by readings in Snyder's "Soils and Fertilizers."

At the beginning of the past academic year the following change was brought into effect. The course in elementary chemistry, which previous to this time was given five hours per week during the winter

and spring terms, was now extended to seven hours per week and scheduled to run throughout the entire year. The extra time thus allotted to the course made it possible not only to give more emphasis to the fundamental theories of the science, but also gave time for considerable work in qualitative analysis. Thus the student now finds in the nature of this last-named work, which has been incorporated in his first course, a true stepping-stone to the more difficult and exacting work in the advanced courses. Partly because of the above-stated changes and partly because there were fewer students taking the course—the laboratory not being overcrowded—the results obtained were far more satisfactory than during the previous year.

This year the course in elementary chemistry continues with the same schedule as outlined above, but owing to the marked increase in the number of students taking the course it has been necessary to divide the class into two sections in order to relieve the overcrowded condition of both laboratory and lecture room. Although this unavoidable division of the class does away with the congested condition in laboratory and lecture room, it is of course entirely unsatisfactory because of the fact that each student now receives only a little over half-time instruction in the subject. As there seems to be every reason for thinking that, for a while at least, each succeeding class will be larger than the last, this condition of affairs can only proceed from bad to worse.

During the past year a room on the second floor of the chemical building was made over into a laboratory for the use of students electing courses in qualitative analysis and agricultural chemistry. This new laboratory, which is large enough to accommodate a class of fourteen students, is now being gradually equipped with all the necessary apparatus for thorough work in either of the two mentioned subjects. On the same floor and within easy access of the student is a departmental library, which contains many valuable chemical books, current journals, and periodicals.

Prior to the past year instruction in elementary physics was given during the fall and winter terms of the second year and continued again during the fall and spring terms of the third year. At the beginning of the past year more hours were added to the course, and it was confined entirely to the second year. This year the course continues to have the same number of hours as in the previous year, but it is now scheduled in the third year. The main reason for instituting the above-stated changes is to provide a suitable one-year's course in elementary physics for those students who take up the third year's work upon entering college and who have not previously had an equivalent course in some preparatory school of recognized standing.

The physics department has been recently moved to the new Horticultural building, where it now occupies two well-lighted rooms on the third floor. The laboratory is fitted up with large working

tables and a full equipment of new physical apparatus necessary for a complete laboratory study of the elements of mechanics, heat, light, sound, and electricity. The physical lecture room is directly off from the laboratory and contains a large lecture table and many costly pieces of apparatus used for demonstration purposes. With the increase in hours devoted to this course and the new physical apparatus which has been recently purchased much improvement is looked for in this department.

Beginning with the present year all second-year students are required to take a course in physical geography, which is scheduled for two hours a week during the entire year. As now planned this course will be devoted to a study of the climate, topography, ocean, soils, distribution of plants and animals, and such other topics as are of vital importance for the understanding of the relation of man to his natural environment. The instruction is by means of text-book and occasional local excursions.

Respectfully submitted,

H. D. NEWTON.

Botany and Summer School

In my annual report of last year I stated that with the opening of the new laboratory in the Horticultural building, it became possible to accommodate the class in elementary botany for third-year students in a single section and thus to give the subject the full time allotted in the schedule. Some 57 students entered the class this fall—about double the number last year—and this increase has again necessitated dividing the class into sections and has caused the loss to the class of about an hour a week of laboratory work. A larger laboratory is needed to accommodate those at present taking the work.

A class in systematic botany given during the fall term has been added for fourth-year men.

The course in fifth-year botany was given last year but is not offered this year, being deferred till the coming year, when by an arrangement of the schedule it will be available to both fifth and sixth-year students. The postponement of this course is giving more time for work on a bulletin which, in collaboration with the horticulturist of the station, I am getting ready for publication by the experiment station, on the winter condition of trees of New England.

The agricultural botanic garden, started on a small scale along the lines suggested in my report of 1908, has been of material service in the practical work of the department. A considerable amount of material has been collected from about Storrs, and specimens and seeds to illustrate important laws of plant life have been contributed by botanists from this country and from abroad. In a symposium on

"The Relation of Botanic Gardens to Modern Botany" held this last year before the American Association for the Advancement of Science, a paper was read on the subject of "The Botanic Garden as a Field Museum of Agriculture," in which the plan of the agricultural garden at Storrs was outlined. Such a garden for purely agricultural instruction seems not to have been planned before, and inquiries have been received from other agricultural institutions in regard to its practical working.

In past reports I have urged the need to the department of greenhouse facilities, which are not at present available, both as a source of supply of laboratory and demonstration material and as a place for certain class exercises where living plants can be studied and experimented upon. The growth of the agricultural botanic garden emphasizes the need of a botanical greenhouse for the department.

I have assisted the state forester in giving the course in forestry and have taken the work in silviculture.

The work in free-hand drawing is practically the same as last year.

In the summer school I have conducted courses in plant forms, plant life, and tree study.

The nature work of the summer school has not been materially changed in the courses given since my last formal report. The agricultural work, however, has been reorganized, and definite courses are now given from an informational standpoint in the following agricultural subjects: Poultry husbandry, fruit culture, landscape architecture, floriculture, dairy industry, animal husbandry, soils, and farm crops. A course in practical cooking has been added. A well-organized course was offered this year in methods of teaching elementary agriculture and was taken by a large number of the teachers enrolled in the summer school. The work consisted in a course of lectures supplemented by demonstrations of typical exercises in school agriculture with a model school of children.

This year for the first time the use of the buildings and boarding facilities at the college was offered to the Willimantic Normal school, and their summer school was given in Storrs. The courses of the normal school and of the college were given separately and were under separate management, but those of each school were open to students registered in the other. The total enrollment of the combined schools, exclusive of about 30 children in the model school, was 143; of these 21 were men and 122 women; 31 took courses exclusively in the normal school, 58 exclusively in the college, and 54 took courses in both schools. A considerable number registered in the college were not teachers, having entered for the information in the agricultural courses. Of the teachers from the state here during the session at least half took courses in both schools. This fact is most encouraging and indicates the value of the combination to both schools. A doubling of the courses offered and of the teaching force results to

the advantage of the individual student. It cannot be questioned that Storrs has superior advantages in point of location for a summer school. Whether a student in the normal school takes any of the definite agricultural courses in the college or not, through the public evening lectures and especially through seeing and becoming more or less well acquainted with the agricultural work of our institution, she will be brought into a more sympathetic appreciation of country life and its activities.

It is possible that a more definitely co-ordinated series of courses can ultimately be worked out as a preparation for teachers in rural schools. The efforts to this end so far made I consider have met with a reasonable measure of success.

Respectfully submitted,

A. F. BLAKESLEE.

Meteorology and Bacteriology

The courses in meteorology and general bacteriology were omitted in 1909-'10, a result of the change from a two-year to a three-year college course.

METEOROLOGY—The subject has been taught as in former years. The course is divided into two parts. The first part considers the static condition of the atmosphere, which includes its composition, density, temperature and capacities. The second part treats of the dynamic features in the activity of the air in carrying moisture, equalizing temperatures, etc. The disadvantage of having recitations only once a week will be remedied by the new schedule, which includes two recitations a week for a term, instead of once a week for two terms, but the time allotted is scarcely sufficient to give a comprehensive idea of this subject. There is needed also a set of weather instruments, such as a barograph, thermograph, sling psychrometer, etc. for class-room demonstration. The weather station here has a set of instruments, but these are not available. Any accidental breakage would make a serious break in the records kept here for nearly twenty-three years.

BACTERIOLOGY—General Bacteriology. This has been given as formerly except in the third part of the course, in which was formerly taught the role of micro-organisms in miscellaneous agricultural processes, diseases, etc. There has been substituted a course on the new ideas of hygiene and preventive medicine as related to bacteria and disease. This has proved to be a very satisfactory change.

The practical work included in this course was considerably hampered by a large class and a too small laboratory room. These conditions made it necessary to divide the class into three sections and give each section only one-third of the laboratory work.

This course was not given in 1909-10.

Dairy bacteriology was given in the winter term, 1910, to the twenty-two dairy students.

Dairy bacteriology for advanced students, six hours a week for the year, was elected by four students, working for the B. S. degree.

Respectfully submitted,

W. M. ESTEN.

Geology and Zoology

Since my last report several changes have been made in the courses of study in this department. A course in zoology has been added after an absence from the curriculum of at least six years. This course should give the students a foundation for the further study of animals, particularly in entomology, poultry, and such farm animals as the student of agriculture needs to study, together with the elements of the evolution of animals. The course has been lengthened from one to two terms, so that the elementary work in entomology and some work in ornithology may be incorporated in it.

The equipment of one room for laboratory purposes exclusively has been particularly helpful in giving students a greater opportunity to do microscopic work as well as such dissecting as is necessary in zoology and entomology. The increase in the number of students in the upper classes has made it necessary to divide the classes into sections for laboratory work in order to provide room for work and time for instruction.

The addition of a number of insect breeding cages and aquaria for such aquatic insects and fresh water life as illustrate particular types of life has aided to give students the opportunity of seeing living specimens as well as the dried specimens in the collections.

An attempt has been made to cooperate with the horticultural department, so that the students may study the harmful insects of the greenhouse and those on the fruit trees together with the application of certain insecticides.

Additions have been made to our collections this last year, but we have filled most of the room in the museum and hereafter substitutions will have to be made rather than additions.

Plans have been made to begin work with honey bees, so that some instruction can be given in apiculture.

Respectfully submitted,

GEORGE H. LAMSON, JR.

Mechanic Arts, Physics, Buildings

The entering classes in mechanical drawing are quite dissimilar in their make-up, some students having no idea of the subject and others being quite well advanced. This is a little trying to the instructor, for under such conditions individual instruction is imperative. Tracy's text-book is used, as in former years, for beginners, followed by Reid's "Mechanical Drawing and Elementary Machine Design." Interspersed with these exercises special plates are introduced as the needs of the students are made evident. With another year added to our schedule advanced work in machine design and construction will be considered as time and opportunity offer.

Woodwork consists of practical work at the bench and includes the handling of tools and the working of different woods. A set of blue prints, illustrating the making of common joints and some advanced work, is employed in aiding the students to lay out and finish the exercises. One hour a week, during the winter term of the third year, is given up to lectures and recitations. Students are encouraged to bring up any topic kindred to carpentry at this time for discussion. Methods of estimating the necessary amount of material and the adaptability of different woods for various purposes are explained.

Limited space and equipment have prevented the students in forging from taking all the work scheduled. Enough is given, however, to enable the graduate to be a fairly competent repair man in the shop or on the farm.

Magnetism, static and current electricity, have been taught by this department up to the current year and are a continuation of second-year physics taught by another department. A profitable trip to the Uncas Power company and the Willimantic Gas and Electric company was made by the class, and every courtesy was shown by those in charge of the plants.

As the number and equipment of buildings increase, repair stock and labor must increase also. The care of buildings and endless repairing necessitates the permanent employment of two or more carpenters, with the occasional services of a plumber or mason.

The heating of a large number of the buildings, control of the water supply, and care of the fire apparatus has been superintended by this department as in former years.

Respectfully submitted,

J. N. FITTS.

Mathematics

A few changes only have been made in my courses since my last report was given. The course in second-year physics is now conducted by Dr. Newton. The change has shortened the number of hours of teaching per week, but the work in the courses taught has increased somewhat by virtue of the larger number of students in the classes. I am teaching then at the present time all of the courses in mathematics and surveying. There are only two which I wish to comment upon; viz., agricultural arithmetic and third-year surveying.

AGRICULTURAL ARITHMETIC—A rather full report of this course was given last year. Since then I have added studies in type, variability, correlation, etc. The modern methods of studying animals and plants have introduced into agricultural studies a large amount of mathematics, some of which is of an elementary character and some of an advanced sort. The distinctive feature of Davenport's "Principles of Breeding," for example, is the placing of the old principles upon a mathematical basis; and the chapters involving many computations and especially the appendix, which treats of statistical methods, are very difficult for students and none too easy for the teachers of the subject. The studies of the Illinois Experiment Station in corn breeding, the bulletins of Dr. East, formerly of the Connecticut Experiment Station, and more recently a lecture by Professor Wing of Cornell before our State Board of Agriculture, are illustrations of the use of mathematics in placing these agricultural principles upon a scientific basis. Right here our course in agricultural arithmetic can be made of great service in the comprehension of these subjects. Here is how we went at it to learn by doing. One morning the class was divided into squads of three and taken to the corn crib, and each squad was given 200 ears to measure and tabulate. The separate records were then combined into one record of the measurements of 2,200 ears. The mode, the average length, the standard deviation, and the coefficient of variability were then computed. Another morning in groups of four students the class measured the lengths and found the weights of 2,200 ears and made a correlation-table. In this way we secured excellent material for training in computation and at the same time were laying a foundation which will be valuable to the student in his future studies. This year we have introduced into the course the computation of log rules and some examples in finding the number of board feet in a stand of timber. Whatever work is given in agricultural arithmetic is not intended as a substitution for, nor encroachment upon, any course which comes later in feeds, fertilizers, breeding, etc., but as a preparation for, and aid to, those courses. My experience shows that there is more material available along the lines indicated than can be used in one term's

work, and for the year 1910-11 the work will be carried through two terms.

SURVEYING—What has hitherto been the third-year surveying was given in 1909-10 at the beginning of the fourth year. The class assembled in September, two weeks before the opening of the college, the members were divided into squads, and the field-work was carried on with an assistant in charge of each squad. Nearly 8 hours a day for 5 days in the week were spent in field work. Class worked Saturday morning instead of Wednesday afternoon, which was a half-holiday. This plan shortens somewhat the long recess of Saturday and Sunday, and giving a rest period in the middle of the week allows a backward student to get caught up with his work. Like crops the squads were rotated in a period of four exercises. I give below one rotation showing the method.

	Sept.	10 Fri. A. M.	10 P. M.	11 Sat. A. M.	13 Mon. A. M.
Div. I	1—10	C_2	P_1	L_2	T_2
Div. II	11—20	T_2	C_2	P_1	L_2
Div. III	21—30	L_2	T_2	C_2	P_1
Div. IV	31—39	P_1	L_2	T_2	C_2

KEY

C_2 —Farm Survey.
T_2 —T-4, T-5, T-6, Tr-1, Tr-5 (pp. 20-24, 30, 32.)
L_2 —L-8 (p. 58.)
P_1 —P-1, P-2, P-3, P-4, P-5 (pp. 79-81.)

The key refers to Tracy's "Exercises in Surveying," a book which was published in July, 1909, and which lessens very much the labor of planning work for a class of this sort.

I think that the classes felt with their instructors that these two weeks' courses were of far more value than one afternoon a week during the spring term could be.

STORRS SCIENTIFIC CLUB—An institution of great helpfulness and inspiration to some members of our faculty and experiment station staff has now passed through three years of successful existence and may be regarded as a permanent fixture at our college. That is the Scientific Club. Here is the call for the first meeting:—"Various members of the Faculty have from time to time emphasized the need of some local association for the purpose of discussing scientific topics of mutual interest. With a view of organizing such an association,

the interested members of the Faculty are requested to meet at the Experiment Station office, Monday, November 18th, 1907 at 7 p. m." In response to this call a dozen or more men assembled and after organizing listened to an address by Dr. Blakeslee on the "Nature and Significance of Sex." Mr. Jarvis was made chairman for the ensuing year, and the undersigned, secretary. It was soon found that the Experiment Station was too small to contain those who were interested to listen to the lectures, and the meetings have since been held in the lecture room of the chemical laboratory, to which students also have been admitted. The speakers and subjects up to the close of the last college year, 1909, are given below:—

C. A. WHEELER, The Purification of Sewage and of Public Water Supplies.

A. W. DOX, Enzymes and Fermentation.

CHAS. THOM, The Mold Problem.

W. M. ESTEN, Dairy Bacteria.

G. H. LAMSON, Geology of Connecticut with special reference to Local Conformations.

CHAS. THOM, The Cornell Summer School of Agriculture.

C. A. WHEELER, The Yale Forest School's Summer Camp at Milford, Pa.

J. M. TRUEMAN, Present Methods of Studying the Problems of Animal Breeding.

W. M. ESTEN, Variations in the Acidity of Fresh Milk.

C. D. JARVIS, Observations on Bean Breeding.

L. A. CLINTON, A Flock of Sheep and its Products.

A. G. GULLEY, The Relative Influence of Stock and Scion.

Mr. Lamson was chairman during the second year.

Respectfully submitted,

CHARLES A. WHEELER.

History, Civics, English

The ground covered in the subjects—History, Civics, English—with which I have to do, was the same as in previous years. A little more emphasis was laid upon European History from the time of Louis XIV. in the course assigned to the fourth class. This additional work seems to be fully justified both by its interest and importance, and by the light thrown upon our colonial history.

In other subjects there has been no variation from previous years.

Respectfully submitted,

H. R. MONTEITH.

English, Economics, Student Records

During the two years since the last report my work in teaching has included the courses known as English 2, English 3, and elementary economics.

ENGLISH 2—The present second-year class was subjected last year to a process of selection, which reduced its size and improved its quality. Both results are contributing to make the work of this course more satisfactory than usual and of grade equivalent to second-year high-school English.

ENGLISH 3—The class in third-year English continues to grow, and will probably have to be divided into sections for recitation. Meanwhile it is recommended that the special agricultural students who have not had two years of high-school English be encouraged to omit this course. Other special students are placed in English where their previous study of the subject seems to warrant. The same thing should be done with special agricultural students. If a definite two-year short course in agriculture is established, and it is desired to include English in the schedule, a new course can be provided, better adapted to the needs of short-course students.

ELEMENTARY ECONOMICS—Formerly this course was required of third-year students, but it has been moved forward to the fifth year. As a result it was omitted in 1909-10, and would have been omitted this year had not certain students desired it. This is made a course in elementary general economics, rather than agricultural economics, because the class includes mechanic arts and home economics as well as agricultural students. Instruction in rural economics is provided for agricultural students elsewhere in their course. They are entitled, however, to a brief consideration of economic conditions in general.

STUDENT RECORDS—In the last report some statistics were presented showing various classifications of the students then in attendance. These are repeated below, with corresponding statistics for the present college year.

	1908	1910
Enrolment to November 30	155	165
Students previously in attendance	67	87
New students	88	78
From Tolland County	27	21
From Fairfield County	25	17
From New Haven County	19	20
From Hartford County	16	14
From Litchfield County	13	16
From Middlesex County	9	12
From New London County	5	10

From Windham County	4	4
From other states	32	46
From other countries	5	5
Male students	127	141
Female students	28	24
Students living at home	20	19
Boarding students	135	146
Agricultural students	108	128
Mechanic arts students	17	11
Home economics students	27	23
Not classified	3	3
First year	42	19
Second year	19	14
Third year	46	80
Fourth year	36	29
Fifth year	3	17
Sixth year	1	3
Specials not classified	7	3
Short courses	1	—
Under 15 years	8	3
Between 15 and 16	12	4
Between 16 and 17	22	12
Between 17 and 18	18	24
Between 18 and 19	25	35
Between 19 and 20	16	19
Between 20 and 21	17	23
Between 21 and 22	15	15
Between 22 and 23	8	10
Between 23 and 24	6	8
Between 24 and 25	1	8
Over 25	7	4
Father's occupation:		
Agricultural	68	67
Not agricultural	70	78
Deceased, or occupation not ascertained	17	20

Of the changes shown by the figures for the present year the following seem worthy of comment. The enrolment has increased from 155 to 165, with more old students in attendance and fewer new students. The fact that the enrolment has increased in face of a decrease in the number of newcomers shows a tendency toward a longer stay on the part of the average student. The change in the courses by which

a fifth year is now required for graduation has brought back 17 students for fifth-year work, and the small encouragement given applicants desiring to enter the first and second years is diminishing the numbers at that end of the course where "thinning-out" proceeds most rapidly.

But there is still a high mortality among our students, as is shown by the fact that with 98 new students entering in 1908-9 and 102 in 1909-10, the total enrolment for the two years was 167 and 197. The entrance of about 100 new students a year in a four-year college means an attendance of about 300. Courses shorter than four years bring the number down, and the mortality in high school work runs higher than in college. As this institution settles down upon four-year courses and abandons work of high-school grade, the student mortality will doubtless decrease, and somewhat smaller numbers of new students each year than we have now will produce a larger number in attendance at one time.

Of the 167 students enrolled during the college year 1908-9, 49 left during or at the end of the year without graduating, and 32 more left during or at the end of the second year without graduating. 42 students out of the original 167 are in college this fall, two years later. Out of 22 second-year students 9 are still here. Out of 44 first-year students 15 are still here.

The classification by counties shows fewer students from Tolland, Fairfield and Hartford counties, more from New Haven, Litchfield, Middlesex and New London counties, and the same from Windham. No special significance attaches to these changes. The total attendance from the state has decreased four, but students from other states have increased fourteen.

There has been an increase of fourteen male students and a decrease of four female students. Students in agriculture have increased twenty, in mechanic arts have decreased six, and in home economics have decreased four. There has been a decrease of twenty-eight in the first and second years, an increase of thirty-four in the third year, a decrease of seven in the fourth year, and an increase of sixteen in the fifth and sixth years.

Students below 17 years of age have decreased twenty-three; students above 17 years of age have increased thirty-three.

Two years ago there were two more students from non-agricultural families than from agricultural. This year there are eleven more.

Respectfully submitted,

E. O. SMITH.

Library and German

Several improvements are to be noted in the library management since our last report. The library is now open twelve hours each school day, eight hours on Saturday, and three on Sunday, an increase, with the exception of Sunday, of four hours daily. This is a privilege greatly appreciated and long desired by the students.

During the last year the United States Department of Agriculture and State Experiment Station bulletins, circulars, and reports have been carefully catalogued, missing numbers as far as possible replaced, and 169 volumes bound. Another important work has been the classifying of the library of Congress author and subject cards for publications of the United States Department of Agriculture. The most of this extra work has been done by Miss Pauline Hopson, who, as library assistant, has proved herself to be careful, painstaking, and accurate. We have accessioned in all from November 1, 1908, to November 1, 1910, 674 volumes. Of these, exclusive of our newly bound volumes of bulletins, 217 are gifts from the government, state, and individuals, and 32 have been bought with money obtained from fines. We have now 11,650 volumes recorded in our accession books.

GERMAN—Because of the change in the course of study there was no regular class beginning German for the college year of 1909-1910. The class for the present college year, however, is the largest and most promising since German was introduced into our curriculum.

Respectfully submitted,

EDWINA WHITNEY.

Expression and Public Speaking

Being a new teacher this year, I will briefly outline my plans for the future. The time allotted the subject being so limited, it is necessary to omit much needed work, to say nothing of the amount that has to be covered in one hour a week.

FIRST YEAR—Evolution of expression, one hour per week. Sight reading, one hour per week.

SECOND YEAR—Evolution of expression and interpretation through sight reading (Dickens), one hour per week.

THIRD YEAR—Speaking from outline, study of drama and extemporaneous speaking, one hour per week.

FOURTH YEAR—Principles of argumentation and extemporaneous speaking, one hour per week.

At the present time this appears satisfactory.

In the study of drama we are working toward the production of a play of literary merit.

The material for sight-reading I hope to change as frequently as possible, that the students may get a variety of good literature, it being through this medium that the subject can be a source of all-around development.

Respectfully submitted,
MARY CUSHING ROGERS.

Military Instruction

In accordance with War Department orders, practical instruction is given in the military department in the following subjects: (a) infantry drill regulations (b) small arms firing manual (c) field service regulations (d) manual of guard duty. Theoretical instruction is also given in the above named subjects as well as in those subjects about which company officers of volunteers or of the Army must have some knowledge, such as military hygiene, military law, administration, company records, and military courtesy.

During the fall term practical instruction in infantry drill regulations occupies all the time. This instruction continues throughout the year, but little can be done in the foot movements during the winter term, as there is no suitable place for such drill indoors.

In the winter term practical instruction in the small arms firing manual and in the manual of guard duty is given. The former consists largely of gallery practice with the 22 caliber rifle. The room in the basement at the north end of Storrs Hall is suitable for this purpose, though a larger room would greatly facilitate the practice. During this term the theoretical instruction is also given and is imparted by means of lectures once a week. Two hours a week are devoted to class-room work for the cadets of the higher classes, the classes which furnish the officers for the following year. This work is important, as it prepares the officers to give accurate instruction to the new students.

During the spring term practical instruction in field service regulations is given. The campus and surrounding country are all that can be desired for this work. Target practice at 200, 300, and 400 yards is also conducted in this term. If another pit were constructed so as to permit of firing at 500 yards, the cadets would have a chance to qualify as marksmen under special course "C." The opportunity to fire this course would be an incentive to better work in target practice.

This year the cadets have been organized into a battalion of two companies, and it is hoped that a competitive spirit will develop which should result in keener interest in the military work. There was no material from which a good band could be oganized, and in its stead

a drum corps of fourteen has been formed and is making favorable progress. It will furnish better march music than a small band could.

The military department is responsible for the discipline in the dormitories. Each section of a dormitory is in immediate charge of a cadet officer, who is assisted by the non-commissioned officers in his section. I make frequent inspections of the dormitories. Thus far no serious breaches of discipline have been reported to me, and I have observed none. This arrangement seems to be satisfactory, and I believe that the discipline here is as good as can be expected.

It is hoped that when more buildings are erected the military department will be provided with space for indoor drill. As this department is a part of the military educational system of the United States, patriotism requires that all give it their hearty support and encouragement.

Respectfully submitted,

J. M. CHURCHILL,

1st. Lieut. 18th Infantry, Commandant.

Grove Cottage and Home Economics

During the two years which have elapsed since the last report, the dormitory for women has been filled to the limit of its capacity.

The students care for their own rooms and take much pride in the arrangement of them. We aim to keep the standards of order and cleanliness high.

Every possible effort is put forth to make the atmosphere of Grace Cottage homelike. Our aim is to send out from the college self-controlled, self-respecting young women.

The ordering of our daily life is arranged with this thought uppermost.

There has been no sickness worthy of mention during the past two years.

HOME ECONOMICS—The aim and scope of the department of home economics is outlined in the catalogue. That the interest in the various branches of this department is steadily increasing is shown by the elective work.

The increase in the amount of work made it necessary to add an assistant to the department the first of last year. For two summers we have given a course in cookery during the summer school. This course has been well attended, and much interest has been shown in the work.

Our need of a modern laboratory for the teaching of cookery was outlined in our last report. Last year some much-needed repairs were made, which greatly improved the ventilation. A new refriger-

ator, two large oil stoves, and two fireless cookers were added. These are a great improvement. We still need new sinks differently placed from the ones now in use. This change will greatly add to the convenience of the room and will save time and labor for the student.

Respectfully submitted,
ALBERTA T. THOMAS.

Music

The work in the music department is being conducted this year much as in preceding years. A good number of students are registered both in vocal and piano study.

A student choir has been formed and a glee club organized, in both of which organizations a large degree of interest has been shown.

Sight-reading classes will be formed during the coming term, and a special effort is being made to encourage more and better singing of our college songs by the student body. The faculty and students are working together to increase the number of C. A. C. songs.

We look forward to a time when there may be regular music courses at Storrs.

Respectfully submitted,
LILLIAN E. BERRY.

Plans for State Ornithologist Work

I. EXPERIMENTATION

To accept the proffer of Mr. G. D. Tilley, of Darien, and make his place The Connecticut Ornithological Experiment Station, connected with The Storrs Experiment Station. This will give the use of a modern, expensive equipment, adequate for all lines of experimental work, without expense for buildings or maintenance.

Studies in economic ornithology usually deal with

1. Habits of wild birds in their haunts.
2. Birds in captivity, in relation to food habits.
3. Dead birds—examination of stomachs.

Most of the last (3) has been done by others, especially the Bureau of Biological Survey. My own experimenting I should plan to make.

A. Along the lines of (1) and (2) above.

B. In feeding and attracting useful birds and inducing them to breed, thus increasing their numbers, and introducing these methods widely throughout the state.
C. The practical breeding and rearing of wild species of especial food value, for re-stocking purposes, especially gallinaceous game-birds and native species of wild ducks, and introducing these methods, as above.
D. Photographic work, for both scientific and educational purposes.

II. GAME BIRD PROPAGATION

The facilities and knowledge have been acquired whereby the raising of our native quail for stocking purposes, also ruffed grouse, Hungarian partridge, or any game-birds desired, can be undertaken on a considerable scale. Birds reared may either be sold to private parties or to The Fish and Game Commission at a much lower rate than though imported. The State Ornithologist, through the press and by personal supervision, can start suitable persons over the State in raising their own game-birds. The right to have game-birds in possession can be secured by the taking out of licenses from the Game Commission. In this way the re-stocking of the State with game could advance rapidly. The Ornithologist can also arrange for the forming of private preserves on which this introduced game can better multiply.

The Fish and Game Commission should be asked to pay part of the salary of the Ornithologist from the hunters' license fees, which fund is used for the increase of game.

III. EDUCATIONAL

1. PRESS WORK. The putting forth of information to the public through syndicated letters and news items through the press of the State.

2. LECTURE WORK. On a salary basis, the Ornithologist should give a certain amount of his time, as decided by the Trustees of The Connecticut Agricultural College, to educational lecturing on the value and interest of bird life, and how to attract useful birds and increase their numbers, using his series of pictures of our birds in their haunts. These lectures should be given without charge, wherever most needed, except that expenses should be collected wherever possible.

3. SCHOOL WORK. The State Board of Education should be asked to provide part of the Ornithologist's salary, and have him give talks and illustrated lectures in public schools throughout the State, and assist the teachers of the State to adequately present to their pupils the instruction of this part of their nature-study courses. Upon the proper presentation of this subject depends largely the success of this whole movement for the conservation of birds useful to crops, fruit, and foliage.

4. BULLETINS. The various results of these lines of work should be put in permanent form as bulletins of The Storrs Agricultural Experiment Station.

IV. ADVISORY CAPACITY TO LEGISLATION

By careful study of bills on the legislative calendar, followed by appearance at hearings and by press articles, to seek to suppress unwise measures, and to present needed legislation.

Respectfully submitted,

HERBERT K. JOB.

A Report Upon the Campus and Grounds of the Connecticut Agricultural College

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IN GENERAL: It is not possible to forecast definitely either the character, or the extent of growth—even for a generation ahead—of an institution like the Connecticut Agricultural College, yet something may be learned from the rapid increase of the last few years, and still more from older institutions throughout our country. These data have been kept in mind, and it is believed that the scope of the plan here set forth is sufficiently wide and sufficiently elastic to be adapted to a great variety of contingencies as they may from time to time develop.

The project for the improvement of the grounds of the Connecticut Agricultural College involves a great variety of considerations, the principal of which may be said to be: the re-arrangement and grouping of buildings; the laying out of driveways and paths as approaches to these buildings and connections between; the devising of lawn and water areas to present an attractive setting for the buildings and to produce fine landscapes; the arrangement of play and athletic grounds; and the planting of roadways, paths, and lawns for shade and effect.

It is scarcely necessary to refer to the importance of a well studied development of these grounds. By this means convenience and economy of circulation both for those in vehicles and those on foot should be secured. Furthermore, the effect upon students and others of fine surroundings and landscape scenery is of great importance, and should have far reaching results where so much of the time is spent in the open air as is the case in an educational institution.

PRECEDENTS FOR A GENERAL PLAN: That there is abundant precedent for the adoption of a pre-determined plan one need go not far afield to discover. The chief attraction of the old Harvard Yard

with its unpretentious brick buildings, lies in their simple but effective grouping with relation to each other, and in the shadows cast by the stately elms. At the University of Virginia, which amongst other things owes its well laid out plan to the genius of Thomas Jefferson, a distinguished result has been secured.

It is safe to say that at the present day the new college is an exception which has not a far reaching plan, while our older institutions are being taken in hand with the idea of making the best of more or less difficult existing conditions.

GROUPING OF BUILDINGS: In a consideration of the proposed grouping of buildings here, they may first be classified as general buildings, viz., those used for classrooms, laboratories, assemblies and other public use; as dormitories for students; as residences for professors and others; and as barns, etc. for animals. Each type requires a special location adapted to its uses; and they all should have a close relation to each other if a homogenous arrangement is to be secured.

CLASSROOM AND DORMITORY GROUPS: These two groups are closely related owing to the relatively large size of the buildings required, and to the fact that the students' residence quarters should be placed conveniently near to their work rooms. With this in view our central group, which forms a composition of three in triangular form, consists of a library and auditorium, a science hall, and an administration and class-room building. The proposed library and auditorium is placed on the highest ground, as shown on the plan, from which it will be seen to good advantage, and from which also fine outlooks may be obtained of the other buildings and of the grounds and outlying country. The other two of this trilogy have equally fine locations. To the westward of the library is a dining hall site. Both of these buildings are flanked to the north and south by dormitories. This makes a compact arrangement for these related structures.

To the south of the science hall location is the existing horticultural group with space allowed for further extension thereof. Still farther south is a domestic science hall location—also with ample space for extension and also so located as to be somewhat to one side of the general group—thus affording a reasonable amount of seclusion.

To the south and west of the buildings just mentioned a gymnasium and athletic field site is provided. This region seems to be very well suited, on account of the level ground and accessibility, for this purpose. Farther to the east and south are shown locations for professors' houses on sites which should be very attractive; while to the west of the athletic field are sites for fraternity houses, both of sufficient numbers for future requirements. This concludes the building sites on the central campus except for a hospital location at the extreme north between the highway and the pond, while across

the road is a mechanic arts building where there is ample room for extension.

FARM GROUP: A farm group comprising a dairy building, stock judging pavilion, barns and stables, and veterinary buildings is shown on a detached sheet and is in the general location of the existing buildings devoted to these departments. This region seems adapted for these purposes in as much as it is convenient to the other buildings and yet somewhat detached. The only building location removed from the aforementioned groups is that of the experimental station, which has been placed at the extreme southeast end in order to adjoin the experimental farm.

DRIVEWAYS AND PATHS: Entrances are shown at various points along the main highway and elsewhere. The general arrangement of driveways and paths, as has been said, is intended to provide adequate circulation between buildings, and also to bring out the attractions of the grounds. They follow the contour of the ground and lead as directly as possible to the various features, and may be easily traced on the plan.

PLANTATIONS: The proposed arrangement and grouping of trees and plants as shown contemplates the supplying of adequate shade for driveways and paths; a setting of foliage for the buildings; and fine landscape effects wherever this is possible. It would seem desirable in the planting of this material to select species which are interesting botanically, such as will furnish material for study by those taking horticultural courses. This planting, furthermore, is arranged to secure open lawns framed in by foliage.

WATER EFFECTS: The chief interior landscape attractions may be secured in connection with the existing pond and another proposed one, which could be made unusually fine by proper plant grouping. These regions being low and marshy are available for little else and offer opportunities well worth while as landscape scenery.

IN CONCLUSION: It will be noted from this description, and from the plan itself, that the recommendations here made are general in character and subject to modifications from time to time as any specific problem arises. The plan as drawn, however, is believed to be sufficiently definite to provide a guide for the further growth of the institution, so that as it develops from time to time it will do so homogeneously and without the necessity of undoing work because it had not been sufficiently foreseen.

It has seemed desirable to supplement the plan here submitted with this written description or report in order that its various features may be outlined clearly and the reasons for them stated; and, furthermore, since the plan provides for the growth of many years, that its execution may be carried out intelligently from time to time and every change or addition be made to fit into its logical place as a part of a consistent whole.

Respectfully submitted,

CHARLES N. LOWRIE.

Federal, State, and Private Aid to the Connecticut Agricultural College

YEAR	COLLEGE						EXPERIMENT STATION		
	STATE AID		FEDERAL AID			PRIVATE GIFTS	FEDERAL AID		STATE AID
	Current Expenses	Buildings, Lands, etc.	Land Grant Act of 1862	Morrill Act	Nelson Act		Hatch Act	Adams Act	
Calendar Year 1881	.....	.....	.....	.....	.....	e $6000 f 9000	.....	.....	.....
1882	$ 5000	.....	.....	.....	.....	.....	.....	.....	.....
1883	10000	.....	.....	.....	.....	.....	.....	.....	.....
1884	5000	.....	.....	.....	.....	.....	.....	.....	.....
1885	6200	.....	.....	.....	.....	.....	.....	.....	.....
1886	7300	.....	.....	.....	.....	.....	.....	.....	.....
1887	6000	$10000	.....	.....	.....	.....	Year from Jul. 1 $7500	.....	.....
1888	8000	.....	.....	.....	.....	.....	7500	.....	.....
1889	8000	.....	.....	.....	.....	.....	7500	.....	.....
1890	8000	50000	.....	.....	.....	.....	7500	.....	.....
1891	10486 69	.....	.....	.....	.....	.....	7500	.....	.....
1892	16427 17	.....	.....	.....	.....	.....	7500	.....	.....
Jan. to Oct. 1893	15184 37	a 10801 18	.....	.....	.....	.....	.....	.....	.....
Year from Oct1 1893	20000	.....	.....	Yr.from Jul. 1 $19170 53	.....	.....	7500	.....	.....
1894	25000	.....	.....	.....	.....	g 1000	7500	.....	.....
1895	25000	12000	.....	20000	.....	.....	7500	.....	$1800
1896	25000	.....	$25732 29	22000	.....	.....	7500	.....	1800
1897	15000	.....	6667 97	23000	.....	.....	7500	.....	1800
1898	15000	.....	6712 95	24000	.....	.....	7500	.....	1800
1899	15000	.....	7252 89	25000	.....	.....	7500	.....	1800
1900	15000	.....	8000	25000	.....	.....	7500	.....	1800
1901	15000	.....	6700	25000	.....	.....	7500	.....	1800
1902	15000	.....	6200	25000	.....	.....	7500	.....	1800
1903	20000	.....	6100	25000	.....	.....	7500	.....	1800
1904	21675	.....	5725 56	25000	.....	.....	7500	.....	1800
1905	20000	60000	6750	25000	.....	.....	7500	Year from Jul. 1 $2500	1800
1906	20000	.....	6750	25000	.....	h {60000 {12000	7500	3500	1800
1907	25000	50000 b 2500	6750	25000	Year from Jul. 1 $ 5000	.....	7500	4500	1800
1908	25000	c 8500	6750	25000	10000	.....	7500	5500	1800
1909	25000	39601 56 d 10000	6750	25000	15000	.....	7500	6500	2000

a. Artesian well and pump
b. Sewage disposal
c. Valentine farm
d. Eagleville road
e. Gift of Charles Storrs
f. Gift of Augustus Storrs
g. Gift of Ratcliffe Hicks
h. Gift of Edwin Gilbert

Inventory

October 1, 1910

FARM

Live stock	$3,074 00	
Products	3,638 00	
Machinery and tools	1,918 15	$8,630 15

DAIRY

Live stock	$5,033 00	
Equipment	3,437 50	8,470 50

HORTICULTURE

Tools and team	$847 90	
Laboratory equipment	2,650 00	
Greenhouse equipment	1,782 00	
Nursery stock and miscellaneous	160 00	
Products on hand	234 00	5,673 90

POULTRY

Live stock	$917 45	
Equipment	608 60	1,526 05

HORSE BARN

Horses	$3,650 00	
Equipment	1,024 75	
Hay and grain	440 00	5,114 75

MECHANICS

Carpenter shop	$388 50	
Blacksmith shop	255 40	
Machine shop	1,975 25	
Drawing material	174 00	
Plumbing and paint supplies	142 50	2,935 65

Natural History—Museum and equipment	3,460 32
Chemistry and Physics—Apparatus and supplies	3,893 10
Veterinary Science—Instruments and models	1,196 75
Agronomy—Soil physics equipment	150 00
Botany and Forestry—Apparatus and equipment	2,664 10
Bacteriology—Apparatus and supplies	799 34
Mathematics—Instruments, models, etc.	1,382 59

Military equipment	636 91
Library—Books and furniture	20,539 00
Dining Hall—Equipment and supplies	2,748 01
Dormitory furniture and janitor's supplies	4,987 80
Infirmary equipment	234 79
Grove Cottage—Furniture and equipment	3,011 00
Office furniture and supplies	2,200 00
Miscellaneous equipment and furniture	6,335 80
Experiment Station—Live stock, tools, apparatus, etc.	7,500 00
Buildings	282,900 00
Artesian well	8,000 00
Sewage plant	2,500 00
Farm and campus	17,500 00
	$404,990 51

GILBERT FARM AT GEORGETOWN, CONN.

Land	$7,500 00	
Buildings	8,329 32	
Live stock, tools, etc	6,327 20	22,156 52
		$427,147 03

Insurance on Buildings and Contents

	IDENTIFICATION	Buildings	Contents	Total
1	Main Building	$31,500	$33,000	$64,500
2	Gold Hall	13,500	900	14,400
3	Grove Cottage	10,500	2,900	13,400
4	Chemical Laboratory	7,200	5,300	12,500
5	Whitney Hall	7,200	1,250	8,450
6	Cottage No. 1	2,500	.....	2,500
7	Cottage No. 2	3,000	.....	3,000
8	Cottage No. 3	3,000	.....	3,000
9	Fitts Cottage	500	.....	500
10	Farm House	500	.....	500
11	Horse Barn	3,500	4,850	8,350
12	Water Tower	3,500	300	3,800
13	Horticultural Hall	17,500	3,000	20,500
14	Agricultural Hall	12,000	6,000	18,000
15	Farm Barn	6,000	8,000	14,000
16	Storrs Hall	39,000	2,500	41,500
17	Experiment Station Office	1,000	600	1,600
18	Poultry Barn	700	350	1,050
19	Green House	900	200	1,100
20	Tool House	350	290	550
21	Poultryman's House	500	400	900
22	Florist's Cottage and Greenhouses	18,500	1,000	19,500
23	New Brooder House	150	.....	150
24	Valentine Dwelling	5,000	.....	5,000
25	Valentine Cottage	1,000	.....	1,000
26	Old Piggery	.....	200	200
27	New Piggery	1,000	.....	1,000
28	Whitney Barn	.....	800	800
29	Cottage No. 4	3,500	.....	3,500
30	Cottage No. 6	3,500	.....	3,500
31	Cottage No. 7	3,500	.....	3,500
32	Cottage No. 8	3,500	.....	3,500
		$204,000	$71,750	$275,750

Glibert Farm

AT GEORGETOWN, CONN.

Report for Year Ending April 1, 1909

April 1, 1908, cash on hand		$930 42
Dividend on Gilbert & Bennett Mfg. Co. stock		5,400 00
Interest		37 61
Far receipts		6,267 09
Farm disbursements	$10,534 94	
April 1, 1909, cash on hand	2,100 18	
	$12,635 12	$12,635 12

Statement Showing Actual Profit in Farm Business

Disbursements:	Stock			$394 96
	Labor			4,615 26
	Supplies			4,720 23
	Expense			804 49
Receipts:	Milk	$5,270 49		
	Stock	358 25		
	Miscellaneous	638 35	$6,267 09	
Permanent Improvements: Charged to real estate account				
	New barn and improving horse barn	$400 00		
	Ice house	690 00		
	Ice pond	430 00		
	Removing stones and walls	586 00		
	Painting buildings	390 00		
	Cementing manure shed	40 00		
	Tool house	75 00		
	Bath room	91 00		
	Sleeping room for men	87 00		
	Building repairs	308 00		
	New fence	110 00		
	Laboratory	120 00	4,327 00	
Depreciaiton: 10 per cent. of real estate account				1,320 86
Expense: Charged to dividend account			804 49	
Inventory of personal property, April 1, 1909		$4,674 05		
Inventory of personal property, April 1, 1908		3,988 35		
Inventory increased			685 70	
Profit in farm transactions				228 48
			$12,084 28	$12,084 28

Year ending April 1, 1907, loss was	$3,028 08
Year ending April 1, 1908, loss was	2,070 83
Year ending April 1, 1909, profit was	228 48

In our report a year ago we predicted that we might come out even this year. The above statement is very much more encouraging than we had dared to hope for, showing a slight profit after charging this year's account with a 10 per cent. depreciation ($1,320.86).

We have opened a real estate account dated from our acceptance of the farm, charging it with the appraisal of the farm and all per-

manent improvements, and deducting therefrom each year 10 per cent., which will be charged to that year's account as depreciation. We hope that by this method the real estate account will never exceed the true valuation of the farm. The real estate account now stands at $11,887.79.

We need a better road to the village, remodeled cow stables, more and better cows, a wagon shed, hay forks, and tracks, a pair of horses, and more cleared fields.

(Signed)
GEORGE S. PALMER,
L. J. STORRS,
A. J. PIERPONT,
Gilbert Farm Committee.

Gilbert Farm

Report for Year Ending April 1, 1910

April 1, 1909, cash on hand		$2,100 18
Dividend, Gilbert & Bennett Mfg. Co.		6,000 00
Interest		39 61
Farm receipts		7,653 67
Farm disbursements	$12,799 31	
April 1, 1910, cash on hand	2,994 15	
	$15,793 46	$15,793 46

Statement Showing Gain or Loss on Farm Business

Receipts:	Milk	$5,576 86	
	Stock	665 25	
	Miscellaneous	1,411 56	
		$7,653 67	
Disbursements:	Land		$50 00
	Stock		956 80
	Labor		4,983 67
	Supplies		5,938 09
	Expense		870 75
			$12,799 31

Permanent improvements (charged to real estate account)		
Stable	$1,639 46	
Grain bins	236 90	

Hay forks and fixtures	233 64		
Moving hay scales	70 30		
New road	293 50		
Grading and old road repairs	164 50		
Moving walls and stones	759 01		
Brush	102 42		
Building repairs	356 87		
New fence	84 93	$3,941 53	
Expense (charged to dividend account)		$870 75	
Depreciation (10% of real estate acct.)			$1,582 93
Inventory personal property, April 1, 1910	$6,327 20		
Inventory personal property, April 1, 1909	4,674 05	1,653 15	
Loss in farm transactions		263 14	
		$14,382 24	$14,382 24

Year ending April 1, 1907, loss was	$3,028 08
Year ending April 1, 1908, loss was	2,070 83
Year ending April 1, 1909, profit was	228 48
Year ending April 1, 1910, loss was	263 14

We are not a little disappointed in being obliged to report a loss in Gilbert Farm business this year, but our disappointment may be tempered by considering the following facts:

1. Profit is not the primary object in conducting this farm. We try to exemplify the methods of practical agriculture taught by the Connecticut Agricultural College, and to do the farmers of the community all the good we can.

2. The time of employees given to entertaining visitors, and keeping stock, barns, and grounds ready for inspection at all times is expensive, and helps cause a poor financial showing.

3. 10% of the real estate account charged to the year's business is a large item ($1,582 93), but we feel that we must do this, so as to keep the real estate account from becoming greater than the actual value of the farm.

4. No account is made of the increased fertility of the soil.

5 Our milk does not sell for the price which the grade of milk we are producing should sell for.

L. J. STORRS,
J. W. ALSOP,
A. J. PIERPONT,
Gilbert Farm Committee.

The Connecticut Agricultural College

Financial Report for Year to October 1, 1909

Appropriations and Accounts Showing Excess of Receipts Above Expenditures

Annual State Appropriation	$25,000 00
Annual Federal Appropriation	40,000 00
Income from Federal Endowment	6,750 00
Rent	2,879 30
Interest	319 17
Fees	277 00
Farm	658 32
Miscellaneous Receipts	642 54
Students' Deposits	5,310 00
	$81,836 33

CASH BALANCE Sept. 30, 1908		
State Fund	$800 14	
Land Grant Fund	32 30	
Morrill Fund	17,012 48	17,844 92
		$99,681 25

Accounts Showing Excess of Expenditures Above Receipts

SALARIES		
Officers	$7,641 56	
Instructors	25,970 54	
Lecturers	239 42	$33,851 52
DEPARTMENTS		
Dairy	1,449 00	
Horticulture and Care and Improvement of Grounds	3,275 84	
Poultry	773 67	
Horse Barn	615 09	
Boarding	615 15	
Forestry	75 22	
Botany	199 13	
Military	139 36	
Library	439 79	
Domestic Science	197 34	
Mechanical	194 08	7,973 67
NEW BUILDINGS AND EQUIPMENT		
Water Tower	1,263 60	
Piggery	325 04	
Sewage Plant	1 00	
App. and Supplies for Inst.	832 59	
Additions and Repairs to Equip.	374 86	
Completing Horticultural Building	5,354 36	
Furnishing Horticultural Building	594 56	8,746 01
REPAIRS AND MAINTENANCE		
Repairs to Buildings	2,560 95	
Fuel and Light	3,965 93	
Engineer and Fireman	1,097 32	
Janitor Work and Supplies	2,323 61	
Insurance	2,223 18	
Operation of Sewage Plant	20 90	12,191 89
SUPPLIES AND SERVICES FOR STUDENTS		
Pew Rent	400 00	
Commencement	186 44	586 44
ADMINISTRATION EXPENSE		
Telephone and Telegrams	135 75	
Traveling Expenses	881 95	
Printing	347 73	
Postage	236 29	
Office Stationery and Supplies	338 91	
Advertising	201 41	
Entertainment of Guests	196 66	2,338 70
GENERAL EXPENSE		
Freight and Express	138 35	
Cartage and Transportation	297 04	
Laundry for Guest Rooms	18 28	
Laundry and Supplies for Grove Cottage	137 06	
Board Allowance to Employees	21 75	
Hicks Prize Deficit	8 00	
Unclassified	436 39	1,056 87
		$66,745 10

CASH BALANCE Sept. 30, 1909		
State Fund	2,151 71	
Land Grant Fund	20 35	
Morrill Fund	30,764 09	32,936 15
		$99,681 25

Special State Appropriation for Valentine Farm

Received from Comptroller	$8,500 00	Paid Geo. S. Palmer	$8,500 00

Gilbert Farm

Balance September 30, 1908	$4,492 51	Expenditures	$12,438 29
Receipts—Farm Products and Interest on Endowment	12,614 47	Balance September 30, 1909	4,668 69
	$17,106 98		$17,106 98

Appropriations and Accounts Showing Excess of Receipts Above Expenditures

Annual State Appropriation	$25,000 00	
Annual Federal Appropriations	45,000 00	
Income from Federal Endowment	6,750 00	
Rent	3,949 09	
Interest	565 20	
Fees	3,904 00	
Miscellaneous Receipts	824 45	
SPECIAL APPROPRIATIONS		
New Water Tower	4,101 56	
Furnishing Horticultural Building	5,000 00	
	$95,094 30	
CASH BALANCES September 30, 1909		
State Fund	$2,151 71	
Land Grant Fund	20 35	
Morrill Fund	30,764 09	
	$32,936 15	
Student Deposits	5,310 00	27,626 15
		$122,720 45

Accounts Showing Excess of Expenditures Above Receipts

SALARIES		
Officers	$7,005 82	
Instructors	28,901 66	
Employees	1,396 56	
Lecturers	437 61	$37,741 65
DEPARTMENTS		
Farm	281 07	
Dairy	1,214 47	
Horticulture and Care of Grounds	3,064 45	
Permanent Improvement of Grounds	2,117 16	
Poultry	619 37	
Horse Barn	1,030 49	
Forestry	43 63	
Botany	595 70	
Military	418 61	
Library	665 77	
Domestic Science	259 97	
Mechanical	248 95	
Extension Work	712 88	11,272 52
NEW BUILDINGS AND EQUIPMENT		
Apparatus and Supplies for Instruction	3,016 27	
Additions and Repairs to Equipment	1,714 08	
Completing Horticultural Building	860 05	
Furnishing Horticultural Building	4,350 37	
New Cottages—Real Estate	500 00	
New Cottages—Road	220 38	
New Dining Hall—Grading	348 43	11,009 58
REPAIRS AND MAINTENANCE		
Repairs to Buildings	4,903 32	
Fuel and Light	2,069 41	
Engineer and Fireman	1,059 17	
Janitor Work and Supplies	1,949 81	
Insurance	1,884 50	
Operation of Sewage Plant	25 73	11,891 94
SUPPLIES AND SERVICES FOR STUDENTS		
Pew Rent	400 00	
Commencement	132 21	532 21
ADMINISTRATION EXPENSE		
Telephone and Telegrams	173 82	
Traveling Expense	1,059 80	
Printing	556 41	
Postage	452 92	
Office Stationery and Supplies	320 89	
Advertising	205 21	
Entertainment of Guests	134 20	2,903 25
GENERAL EXPENSE		
Freight and Express	143 70	
Cartage and Transportation	745 08	
Laundry for Guest Rooms	28 54	
Laundry and Supplies for Grove Cottage	92 17	
Hicks Prize Deficit	8 00	
Unclassified	953 79	1,971 28
		$77,322 43
CASH BALANCES September 30, 1910		
State Fund	12,222 51	
Land Grant Fund	116 28	
Morrill Fund	33,059 23	45,398 02
		$122,720 45

Gilbert Farm

Balance September 30, 1909	$4,668 69	Expenditures	$13,648 28
Receipts—Farm Products and Interest on Endowment	15,789 10	Balance September 30, 1910	6,809 51
	$20,457 79		$20,457 79

Special Appropriations

Special Appropriation for Eaglevile Road	$10,000 00	Expense for Survey	$445 18
		Balance unexpended	9,554 82
	$10,000 00		$10,000 00
Special Appropriation for Cottages	$18,000 00	Paid for Advertising	$25 48
		Paid H. Blackledge	8,000 00
		Paid C. H. Preston	796 87
		Paid Anthony Adams	730 00
		Paid Eaton Chase Co.	305 20
		Balance unexpended	8,142 45
	$18,000 00		$18,000 00
Special Appropriation for Dining Hall	$12,500 00	Paid for Advertising	$12 45
		Paid Charles S. Palmer	480 00
		Paid Edgar Rhodes	850 00
		Balance unexpended	11,157 55
	$12,500 00		$12,500 00

Certificates of State Auditors

This certifies that we have examined the accounts of D. W. Patten, Treasurer of the Connecticut Agricultural College, for the fiscal year which ended September 30, 1909, have compared them with the vouchers therefor, and found them correct. The balances in the hands of said Treasurer on said last mentioned date were as follows:

State Fund	$2,141 71
Land Grant Fund	20 35
Morrill Fund	30,764 09
State and U. S. Fund	1,523 98
Gilbert Farm Fund	4,680 59
Total	$39,130 72

Which funds are all on deposit in several different banks as shown by bank books.

WM. P. BAILEY,
EDWARD S. ROBERTS,
Auditors of Public Accounts.

This is to certify that we have examined the accounts of D. W. Patten, Treasurer of the Connecticut Agricultural College, for the year ending September 30, 1910, have compared the same with the vouchers therefor, and find them correct. We find the balances in the different funds on the above mentioned date were as follows:

State fund on deposit with the Hartford Trust Co.	$12,237 51
Land grant fund on deposit with Windham Natl. Bank	120 68
Morrill fund on deposit with First Natl. Stafford Springs	13,059 23
State and U. S. fund on deposit with Windham Natl. Bank	2,545 41
Gilbert Farm fund on deposit with Charter Oak Natl. Bank, Hartford	6,839 85

We also find that the above mentioned treasurer holds a certificate of deposit of the Hartford Trust Co., dated July 21, 1910, No. 2,497 for the sum of $20,000.00.

WILLIAM P. BAILEY,
EDWARD S. ROBERTS,
Auditors of Public Accounts.

Hartford, Conn., December 9, 1910.

CHAPTER XXXV.

An Act Concerning Reports of State Institutions

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. It shall be the duty of the officers of each institution and commission of this State, who are required by law to report to the Governor or to the General Assembly, to give, in the financial statement of receipts and expenditures contained in their respective reports, a detailed statement of the salaries paid to each and every officer and employee for the year ending with the 30th day of September next preceding.

Section 2. This Act shall not apply to any officer or employee whose compensation is less than four hundred and fifty dollars per annum.

Approved, March 17, 1897.

1908-1909

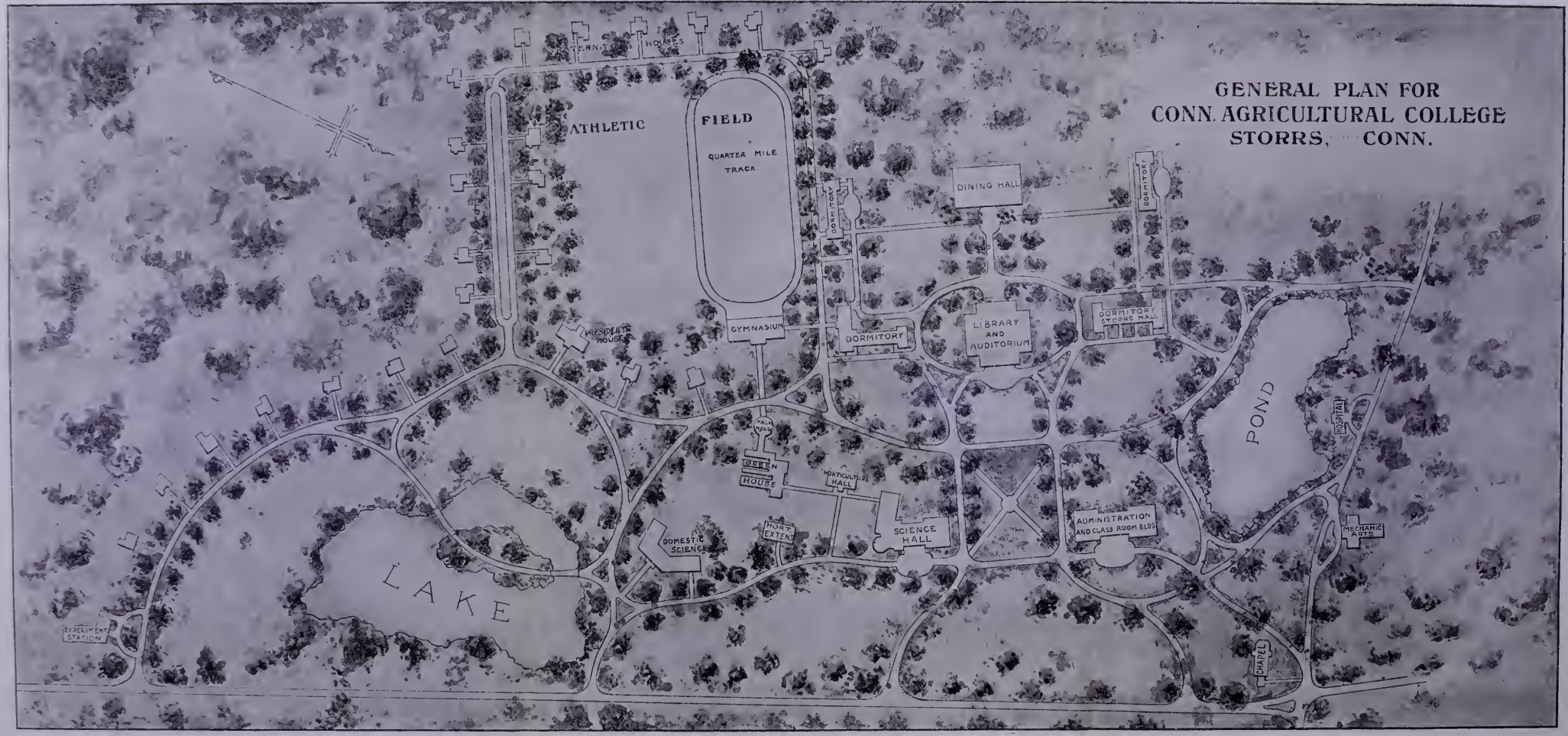
Officers and employees of the college who received more than $450.00 were paid at the annual rates and from the funds shown below.

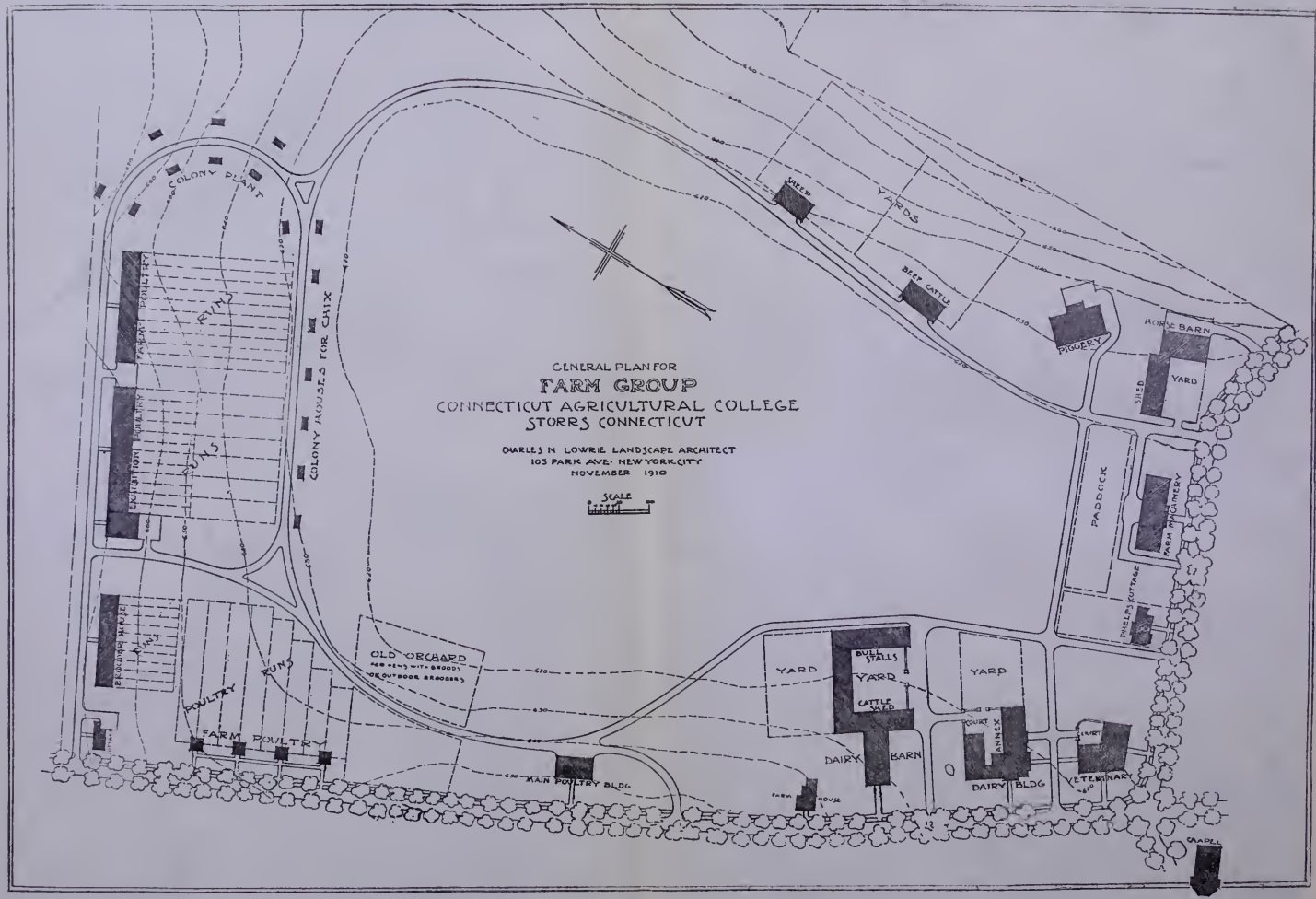
Name	College Funds	Experiment Station Funds	Total
C. L. Beach	$3,600.00	.....	$3,600.00
L. A. Clinton	1,500.00	$1,500.00	3,000.00
A G. Gulley	2,300.00	.....	2,300.00
J. M. Trueman	1,300.00	1,200.00	2,500.00
C. A. Wheeler	2,000.00	.....	2,000.00
H. R. Monteith	2,000.00	.....	2,000.00
E. O. Smith	2,000.00	.....	2,000.00
A. F. Blakeslee	1,900.00	.....	1,900.00
F. H. Stoneburn	1,200.00	800.00	2,000.00
W. M. Esten	900.00	800.00	1,700.00
C. D. Jarvis	.....	1,500.00	1,500.00
H. L. Garrigus	1,600.00	.....	1,600.00
G. H. Lamson, Jr.	700.00	600.00	1,300.00
H. D. Edmond	400.00	900.00	1,300.00
J. N. Fitts	1,300.00	.....	1,300.00
Alberta T. Thomas	1,300.00	.....	1,300.00
A. T. Stevens	1,000.00	.....	1,000.00
Susy D. Rice	1,000.00	.....	1,000.00
F. C. Gunther	900.00	.....	900.00
E. B. Fitts	900.00	.....	900.00
Edwina M. Whitney	900.00	.....	900.00
Orpha Cecil Smith	850.00	.....	850.00
Abby M. Hicks	750.00	.....	750.00
Elizabeth Donovan	600.00	.....	600.00
Ethel F. Walker	640.00	.....	640.00
Edna M. Butler	600.00	.....	600.00
Grace Seage	.....	600.00	600.00
H. G. Carroll	.....	660.00	660.00
H. D. Newton	600.00	.....	600.00
E. D. Proudman	608.32	.....	608.32
L. M. Parker	648.00	.....	648.00
J. R. Foster	350.00	350.00	700.00
Peter Kuchle	570.00	.....	570.00
C. N. Fenn	600.00	.....	600.00
Fred Lane	840.00	.....	840.00
H. P. Crane	537.00	.....	537.00
Bert Haskell	480.00	.....	480.00
J. O. Sullivan	.....	480.00	480.00
Thomas Brown	480.00	.....	480.00
Fred Gill	800.00	.....	800.00
Jacob Wharmby	540.00	.....	540.00
Henry Day	505.39	.....	505.39
D. C. Flaherty	673.39	.....	673.39
David Brown	480.00	.....	480.00
Will Day	457.52	.....	457.52
Joseph Brown	464.28	.....	464.28

1909-1910

Officers and employees of the college who received more than $450 were paid at the annual rates and from the funds shown below.

Name	College Funds	Experiment Station Funds	Total
C. L. Beach	$4,000.00	.....	$4,000.00
L. A. Clinton	1,500.00	$1,500.00	3,000.00
A G. Gulley	2,400.00	.....	2,400.00
J. M. Trueman	1,300.00	1,200.00	2,500.00
C. A. Wheeler	2,000.00	.....	2,000.00
H. R. Monteith	2,000.00	.....	2,000.00
E. O. Smith	2,000.00	.....	2,000.00
A. F. Blakeslee	2,000.00	.....	2,000.00
F. H. Stoneburn	1,200.00	800.00	2,000.00
W. M. Esten	600.00	1,200.00	1,800.00
C. D. Jarvis	500.00	1,500.00	2,000.00
H. L. Garrigus	1,600.00	.....	1,600.00
G. H. Lamson, Jr.	900.00	600.00	1,500.00
J. N. Fitts	1,500.00	.....	1,500.00
Alberta T. Thomas	1,400.00	.....	1,400.00
H. D. Edmond	400.00	900.00	1,300.00
H. D. Newton	1,200.00	.....	1,200.00
A. T. Stevens	1,000.00	.....	1,000.00
Susy D. Rice	1,000.00	.....	1,000.00
Edwina M. Whitney	1,000.00	.....	1,000.00
E. B. Fitts	900.00	120.00	1,020.00
F. C. Gunther	900.00	.....	900 00
W. M. Wilson	864.00	.....	864.00
Fred Gill	800.00	.....	800.00
Orpha Cecil Smith	850.00	.....	850.00
Abby M. Hicks	750.00	....	750.00
Magdelene Mohr	.....	660.00	660.00
Edna M. Butler	650.00	.....	650.00
Chas. F. Stephenson	325.00	325.00	650.00
Christie J. Mason	.....	800.00	800.00
Elizabeth Donovan	650.00	.....	650.00
Cora D. Grant	305.00	195.00	500.00
Jacob Wharmby	600.00	.....	600.00
Peter Kuchle	570.00	.....	570.00
J. R. Foster	290.00	290.00	580.00
H. P. Crane	540.00	.....	540.00
Henry Day	540.00	.....	540.00
D. C. Flaherty	734.12	.....	734.12
James Rostrom	775.67	.....	775.67
Will Day	481.23	.....	481.23
Bert Haskell	480.00	.....	480.00
David Brown	480.00	.....	480.00
J. O. Sullivan	.....	480.00	480.00
Thomas Brown	480.00	.....	480.00
Walter Hauschild	475.18	.....	475.18
Richard Mason	468.67	.....	468.67
Joseph Brown	460.62	.....	460.62
Fred Kosubovsky	451.13	.....	451.13
Grace Seage	212.50	237.50	450.00
L. F. Rettger	.....	450.00	450.00


GENERAL PLAN FOR
CONN. AGRICULTURAL COLLEGE
STORRS, CONN.
ATHLETIC FIELD
QUARTER MILE TRACK
STERNS
HORSES
DORMITORY
DINING HALL
DORMITORY
PRESIDENT'S HOUSE
GYMNASIUM
DORMITORY
LIBRARY AND AUDITORIUM
DORMITORY STORRS HALL
POND
HOSPITAL
PALM HOUSE
GREEN HOUSE
HORTICULTURE HALL
HORT. EXTENS.
DOMESTIC SCIENCE
SCIENCE HALL
ADMINISTRATION AND CLASS ROOM BLDG
MECHANIC ARTS
LAKE
EXPERIMENT STATION
CHAPEL


GENERAL PLAN FOR
FARM GROUP
CONNECTICUT AGRICULTURAL COLLEGE
STORRS CONNECTICUT
CHARLES N LOWRIE LANDSCAPE ARCHITECT
103 PARK AVE. NEW YORK CITY
NOVEMBER 1910
SCALE
COLONY PLANT
COLONY HOUSES FOR CHIX
RUNS
EXHIBITION POULTRY
OLD ORCHARD
POULTRY
FARM POULTRY
MAIN POULTRY BLDG.
SHED
YARDS
BEEF CATTLE
PIGGERY
HORSE BARN
YARD
PADDOCK
FARM MACHINERY
PHELPS COTTAGE
BULL STALLS
CATTLE SHED
DAIRY BARN
DAIRY BLDG.
ANNEX
VETERINARY
FARM HOUSE
CHAPEL